Form DWR-052
3/81

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

REPORT OF PHONE CALL OR VISIT

Bureau or Office Metro

30-0588

In ✓ Out

File Kearny

Date 5/17/88 Time

Routing OBA

Person Contacted Internal / Helen

Phone No.

Affiliation [redacted]

Subject of Call Visit Landfill Leachate

Summary of Call Visit Landfill on south side of 280 heading East - almost to Newark Turnpike (ask Helen for exact directions) - has a smelly, black run-off. After running down the hill of the landfill the leachate collects in a ditch below.

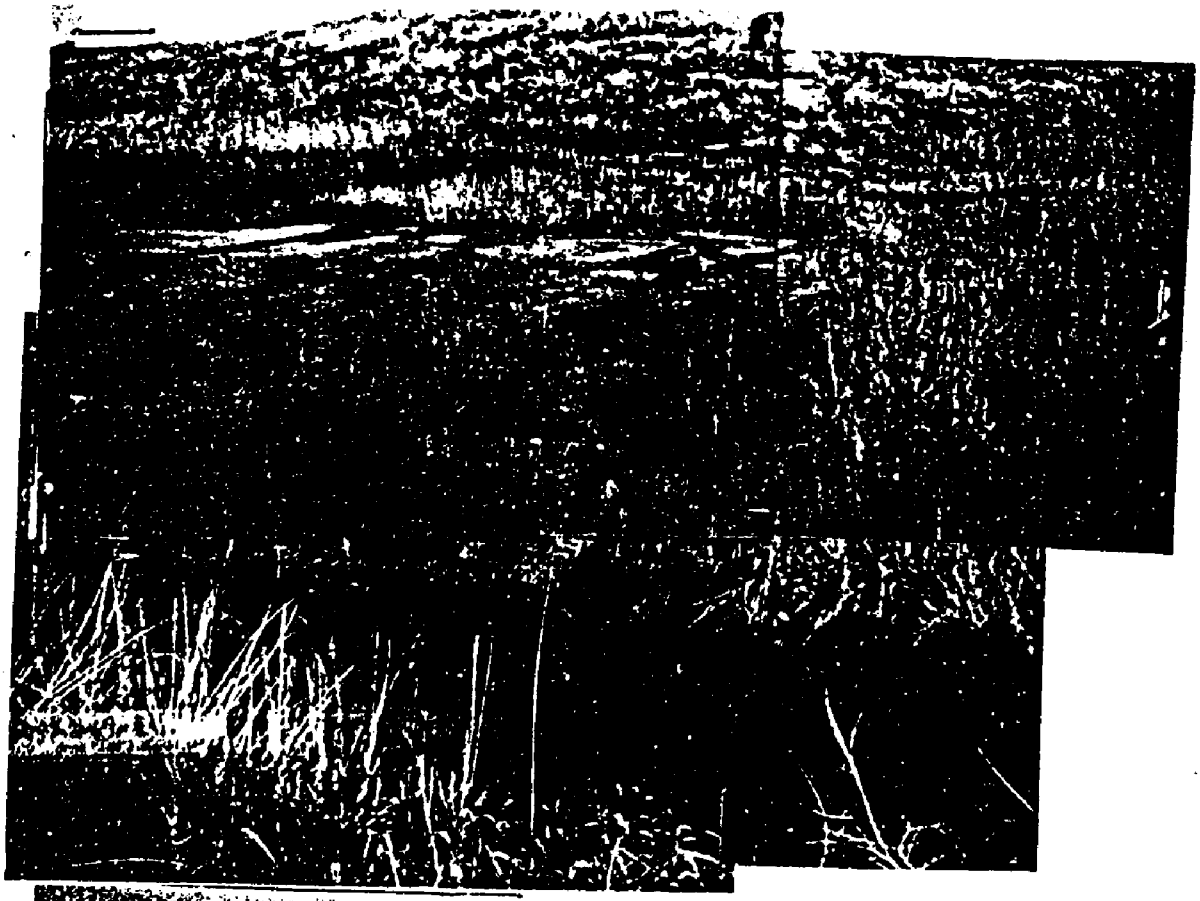
BAG000035

Action Recommended

(Helen took pictures)

R. Harris
Signature

TIERRA-A-018305



10

5/16/88 LANDFILL
KEARNY I.D. LF
NJ 00 51837

COMPLAINT 30 0588

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.E.
DEPUTY DIRECTOR

February 10, 1989

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mayor and Council
Town of Kearny
402 Kearny Avenue
Kearny, NJ 07032

Re: Compliance Evaluation Inspection
Kearny 1-D Sanitary Landfill
NJPDES No. NJ 0051837
Kearny/Hudson County

Gentlemen:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on January 18, 1989. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. The permittee is not sampling the six (6) ground water monitoring wells and submitting Monitoring Report Forms as required by Part I, Page 7, Condition g(1) of the site's NJPDES permit.

2. The permittee has not submitted a plot plan of the site including the location of all ground water monitoring wells and methane gas vents as required by Part II, Page 1, Conditions 3(a) of the site's NJPDES permit.

3. Ground Water Monitoring Well Certification Forms A and B for each existing ground water monitoring well have not been

BAA000068

submitted as required by part II, Page 2, Condition 3(c) of the sites NJPDES permit.

4. The permittee is not conducting weekly inspections of the monitoring wells or maintaining an inspection record as required by Part II, Page 3, Condition 9 of the site's NJPDES permit.

5. The permittee has not delineated all leachate discharges to the surface waters of the State as required by Part II, Page 4, Condition 18 of the site's NJPDES permit.

6. The seven (7) wells located during the inspection did not have well permit numbers attached to the casing. The five (5) wells believed to be Monitoring Wells 1 through 5 did not have well permit numbers attached to the casing as required by Part II, Page 3, Condition 8 of the NJPDES site's permit.

7. The permittee failed to report the damage to Monitoring Wells 1, 2 and 6 as required by Part II-F, Page 2 Condition 10 of the site's NJPDES permit. Monitoring Wells 1 and 2 have bent casings that may cause sampling difficulties, Monitoring Well 6 could not be located during the inspection and may have been demolished by the construction crew installing the methane recovery system.

8. Contaminated run-off and leachate from the landfill collects in several locations around the base of the landfill and discharges to the surface waters of the State. This discharge is a unpermitted discharge to the surface waters of the State, the Town of Kearny must cease this discharge.

Deficiencies 1 through 6 were noted in the directive letter to the Town of Kearny dated February 10, 1988. The Town of Kearny has failed to correct these deficiencies as stated in Mr. Norman Doyle's letter to the Department dated May 13, 1988.

The deficiencies noted above are significant violations of the terms and conditions of your NJPDES permit and/or the Water Pollution Control Act Regulations (N.J.A.C. 7:14A-1 et seq.). You are therefore DIRECTED to institute corrective measures. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch within thirty (30) calendar days of the date of this correspondence.

You are advised that the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) provides for substantial monetary and criminal penalties in cases of permit violations.

Please direct all correspondence and inquiries to Deborah R. Ford, the Environmental Specialist responsible for this case, who can be reached at (201) 669-3900, or by letter through this Division.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection, as stated above.

Very truly yours,

Stefan Sedlak

Stefan D. Sedlak
Section Chief
Metro Bureau of
Regional Enforcement

E14:G25

c: Dr. Richard A. Baker, USEPA
Mr. Paul Molinari, USEPA
Health Official
Mr. Scott Tyrell, BAP

Enclosure

bc: Zaheer Hussain, Enforcement
Criminal Justice
Central File ✓

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0051837 NO. OF DISCHARGES 6 MW's CLASS MAJ/IND

DISCHARGER Kearny ID Landfill

OWNER Town of Kearny

MUNICIPALITY Kearny COUNTY Hudson WATERSHED CODE GW

LOCATION Intersection of NJ Turnpike and Newark turnpike

RECEIVING WATERS Groundwater STREAM CLASS NA

LICENSED OPERATOR & PLANT CLASS —

TRAINEE/ASSISTANT — OTHER INFO. (201) 939-5805 (Neglia)

DEFICIENCIES OR COMMENTS - See letter -

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR Deborah R. Ford TITLE Environmental Specialist

INFORMATION FURNISHED BY (Name) Mr. Barry Sutherland, P.E.

(Title) Director of Engineering (Organization) Neglia Engineering Associates

DATE OF INSPECTION January 18, 1989

Permit # NJ0051837

Kearny ID

DISCHARGE SURVEILLANCE REPORT

Date 1/18/89

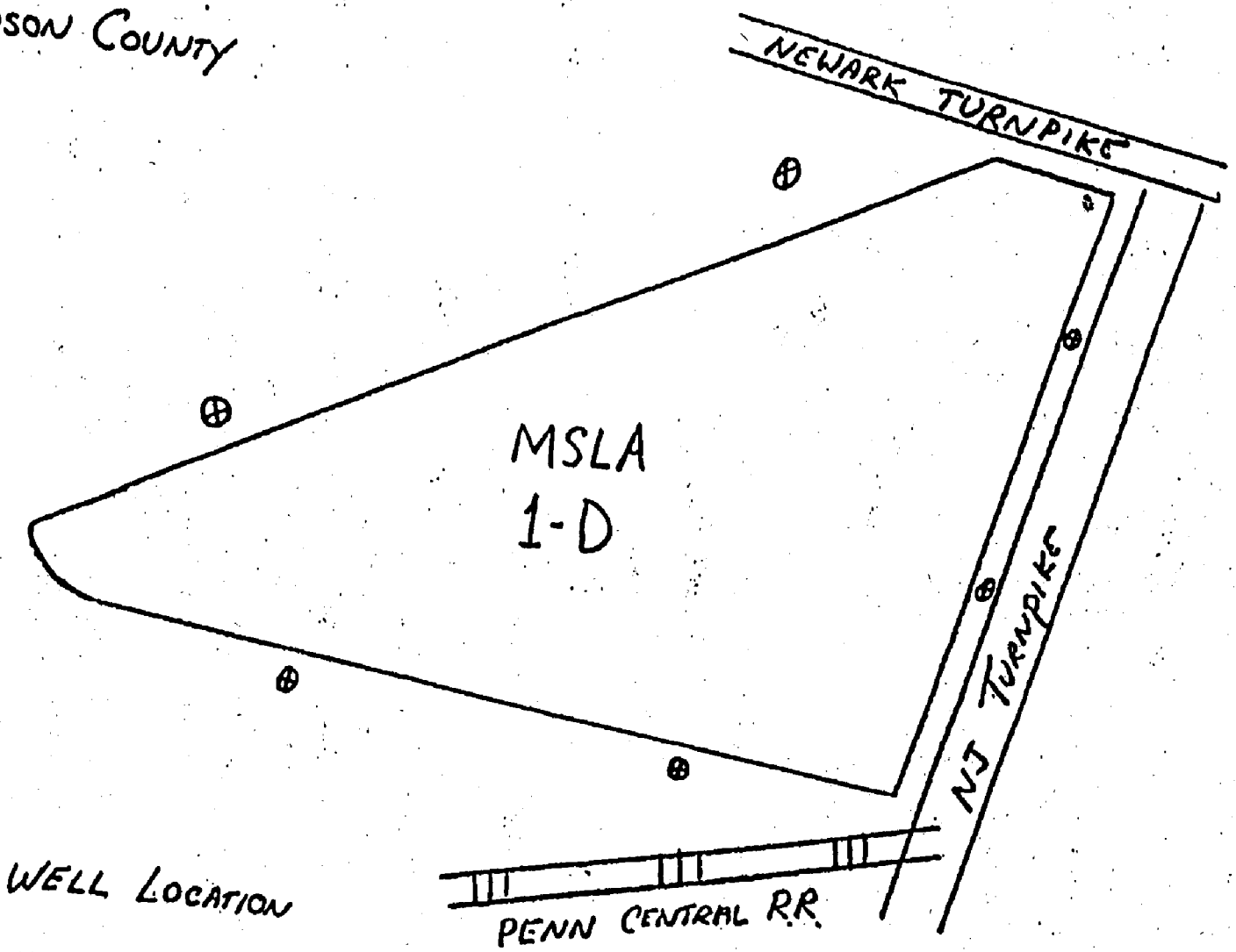
GROUND WATER DISCHARGE EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable NI-not inspected

		RATING	COMMENTS
GENERAL	TYPE DGW	—	Landfill
	RCRA FACILITY	NA	
	DISCHARGE NUMBER	NA	
	WASTEWATER SOURCE/FREQ.		Leachate
	PUMPS AND PIPING	NA	
	ALTERNATE POWER/ALARM	NA	
	BYPASS	NA	
MONITORING SYSTEM	WATER SUPPLY/MONITORING	NI	
	AQUIFERS MONITORED	—	Organic Mat + Clays of the Hackensack Meadowlands
	UPGRADIENT WELLS	U	wells are not numbered
	DOWNGRADIENT WELLS	U	
	SAMPLING PLAN	U	none
	SAMPLING PROCEDURES	U	Samples are not being collected
	LAB CERTIFICATION	—	
	RECORDS	U	No Sample results
	REPORTING	U	No Sample Data Submitted
	Inspection Log	U	Weekly inspections are not being conducted.
LYSIMETER/ MONITORED WELLS	DRILLING PERMIT NUMBERS	—	See Below
	WELLS NUMBERED/IDENTIFIED	U	The seven (7) wells located were not numbered
	LOCKS/INTEGRITY	M	The 7 wells were locked - No keys available
	ABANDONMENT PLAN	NI	
	ELEVATION INFORMATION		
	WATER LEVEL MEASUREMENT		
	TURBIDITY FREE		
	SUFFICIENT YIELD		
UIC	CLASSIFICATION		monitoring wells
	PERC./LEACHING PROBLEMS		MW-1 26-05003-6
	SOLVENTS/REPAIRS MADE	NA	MW-2 26-05004-4
	MAX. PRESSURE & VOLUME		MW-3 26-05005-2
	CLOSEST USDW/SUPPLY WELLS		MW-4 26-05006-1
	MOUND INTEGRITY/COVER		MW-5 26-05007-9
IMPOUNDMENT	LINING INTEGRITY		* MW-6 26-05005-7
	EMBANKMENT INTEGRITY		
	LEACHATE COLLECTION SYS.	NA	* The well noted to be MW-6 could not be found - Possibly demolished by construction crew installing the methane Recovery System
	SOLIDS BUILDUP/REMOVAL		
	HEIGHT TO FREEBOARD		
	APPEARANCE		
LAND APPLICATION/ SPRAY SYSTEM	EVEN DISTRIBUTION		
	PONDING/RUNOFF/EROSION		
	SPRAY HEADS		
	DISCING		
	COVER CROP	NA	
	APPEARANCE		
	BUFFER ZONE		
	SLUDGE STOCKPILED		
OTHER	SEEPAGE/LEACHING	NA	
	ODOR/AEROSOLS	U	Methane venting up through cover - Recovery System is being installed
	FLOW MONITORING/RECORDING	NA	

ATTACHMENT 1

MSLA 1-D - KEARNY
HUDSON COUNTY



⊕ MONITOR WELL LOCATION

NOT TO SCALE

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

(201) 669-3900

February 28, 1990

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mayor and Council
Town of Kearny
402 Kearny Avenue
Kearny, NJ 07032

Re: Compliance Evaluation Inspection
MSLA 1-D Kearny Landfill
NJPDES No. NJ0051837
Kearny/Hudson County

Gentlemen:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on January 10, 1990. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. The permittee is not sampling the six (6) ground water monitoring wells and submitting Monitoring Report Forms as required by Part 1, Page 7, condition g(1) of the site's NJPDES permit.

2. The permittee has not submitted a plot plan of the site including the location of all ground water monitoring wells and methane gas vents as required by Part II, Page 1, conditions 3(a) of the site's NJPDES permit.

3. The permittee is not conducting weekly inspections of the monitoring wells or maintaining an inspection record as required by Part II, Page 3, condition 9 of the site's NJPDES permit.

122

BAG000010

4. The permittee has not delineated all leachate discharges to the surface waters of the state as required by Part II, Page 4, condition 18 of the site's NJPDES permit.

5. The four (4) wells located during the inspection did not have well permit numbers attached to the casing as required by Part I, Section 10 and Part II-F, section 8 of the site's NJPDES permit.

6. The permittee failed to report the damage to Monitoring Wells 1,2,5 and 6 as required by Part II-F, Page 2, condition 10 of the site's NJPDES permit. Monitoring wells 1 and 2 have bent casing that may cause sampling difficulties, Monitoring Wells 5 and 6 could not be located during the inspection and are believed to have been accidentally demolished.

7. Contaminated run off and leachate from the landfill collects in several locations around the base of the landfill and discharges to the land and surface waters of the State. This discharge is a unpermitted discharge to the land and surface waters of the State. The Town of Kearny must cease this discharge.

8. The permittee has failed to repair or replace the damaged wells as required by Part 1, section 10 and Part II-F, section 10.c of the site's NJPDES permit. Unusable wells must be sealed as required by Part I, section 10 of the permit.

9. The permittee failed to submit a completed permit renewal to the Department 180 days prior to the expiration date of the permit as required by Part I, section 2.A.

Deficiencies 1 through 5 were noted in the directive letters to the Town of Kearny dated February 10, 1988 and February 10, 1989. The Town of Kearny has failed to correct these deficiencies as stated in Mr. Norman Doyle's letter dated March 20, 1989. Deficiencies 6 and 7 were noted in the directive letter to the Town of Kearny dated February 10, 1989. The Town of Kearny has failed to correct these deficiencies as stated in Mr. Joseph E. Neglia's letter to the Department dated March 20, 1989.

The deficiencies noted above have placed your facility in significant violation of the terms and conditions of your NJPDES permit and/or the Water Pollution Control Act Regulations (N.J.A.C. 7:14A-1 et seq.). You are therefore directed to institute corrective measures. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch, within thirty (30) calendar days of the date of this correspondence.

You are advised that the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) provides for substantial monetary and criminal penalties in cases of permit violations.

Please direct all correspondence and inquiries to Deborah R. Ford, the Environmental Specialist responsible for this case, who can be reached at (201) 669-3900, or by letter through this Bureau.

Very truly yours,

Stefan D. Sedlak
Section Chief
Landfill/UST's Enforcement Section
Metro Bureau of
Regional Enforcement

E14:G26

c: Chief, Permits Administrative Branch, USEPA
Mr. Patrick M. Durack, USEPA
Mr. Edward Grosvenor, H.O.
Mr. Barry Sutherland, P.E. Neglia Engineering Asso.

BC: ZAHEER HUSSAIN
JAMES LYKO
CENTRAL FILE

Form DWR-063
3/8:

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0251837 NO. OF DISCHARGES 6 MW CLASS

DISCHARGER MSLA 1D Kearny Landfill

OWNER Town of Kearny

MUNICIPALITY Kearny COUNTY Hudson WATERSHED CODE —

LOCATION Newark-Jersey City Turnpike (Between Rt 280 & NJ Turnpike

RECEIVING WATERS Groundwater STREAM CLASS —

LICENSED OPERATOR & PLANT CLASS —

TRAINEE/ASSISTANT — OTHER INFO. (201) 939-8805 (Neglia)

DEFICIENCIES OR COMMENTS (1) Monitor Wells are not being sampled and Monitoring Report Forms are not being submitted. (2) weekly well inspections are not conducted and Inspection Record Maintained (3) Damage to wells 1, 2, 5 and 6 not Reported. (4) Damaged wells have not been replaced. (5) wells are not numbered (6) Plot plan has not been submitted (7) Leachate discharges have not been delineated. (8) Permit renewal has not been submitted. (9) Unpermitted discharge of leachate to the land and surface waters of the state.

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR Deborah R. Ford TITLE Environmental Specialist

INFORMATION FURNISHED BY (Name) Barry Sutherland, P.E.

(Title) Director of Engineering (Organization) Neglia Engineering Asso.

DATE OF INSPECTION January 10, 1990

Form DWR-062
1/85

NEW JE[illegible]Y DEPARTMENT OF ENVIRONMENTAL PROTE[illegible]ON
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

Permit # 0051937

DISCHARGE SURVEILLANCE REPORT

Date 1/10/90

GROUND WATER DISCHARGE EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	TYPE DGW	—	Landfill leachate
	RCRA FACILITY	NA	
	DISCHARGE NUMBER	NA	
	WASTEWATER SOURCE/FREQ.	—	Leachate
	PUMPS AND PIPING	NA	
	ALTERNATE POWER/ALARM	NA	
	BYPASS	NA	
MONITORING SYSTEM	WATER SUPPLY/MONITORING	NA	
	AQUIFERS MONITORED	—	Organic Mat. Clays of the Hackensack Meadows
	UPGRADIENT WELLS	U	Wells are not numbered and/or signs are gone
	DOWNGRADIENT WELLS	U	2 of 4 wells located, can't be
	SAMPLING PLAN	U	No sampling is being conducted
	SAMPLING PROCEDURES	U	"
	LAB CERTIFICATION	—	
	RECORDS	U	No Monitor Reports or Inspection Log
	REPORTING	U	Monitor Reports are not being submitted
	Inspection Log	U	Weekly inspections are not being conducted
LYSIMETER/ MONITORED WELLS	DRILLING PERMIT NUMBERS	—	See Below
	WELLS NUMBERED/IDENTIFIED	U	Wells Not Numbered
	LOCKS/INTEGRITY	—	All four wells vandalized (or sampled by E.P.A.
	ABANDONMENT PLAN	NI	
	ELEVATION INFORMATION	↓	Monitor Wells
	WATER LEVEL MEASUREMENT		MW1 26-05003-6
	TURBIDITY FREE		MW2 26-05001-4
	SUFFICIENT YIELD		MW3 26-05005-2
			MW4 26-05006-1
			MW5 26-05007-9
			MW6 26-05008-7
UIC	CLASSIFICATION	NA	2 wells could not be located (may have been destroyed)
	PERC./LEACHING PROBLEMS	↓	2 wells are damaged and cannot be sampled
	SOLVENTS/REPAIRS MADE		
	MAX. PRESSURE & VOLUME		
	CLOSEST USDW/SUPPLY WELLS		
	MOUND INTEGRITY/COVER		
IMPOUNDMENT	LINING INTEGRITY	NA	
	EMBANKMENT INTEGRITY	↓	
	LEACHATE COLLECTION SYS.		
	SOLIDS BUILDUP/REMOVAL		
	HEIGHT TO FREEBOARD		
	APPEARANCE		
LAND APPLICATION/ SPRAY SYSTEM	EVEN DISTRIBUTION	NA	
	PONDING/RUNOFF/EROSION	↓	
	SPRAY HEADS		
	DISCING		
	COVER CROP		
	APPEARANCE		
	BUFFER ZONE		
	SLUDGE STOCKPILED		
		↓	
OTHER	SEEPAGE/LEACHING	U	Leachate discharges to surface water.
	ODOR/AEROSOLS	U	Methane and Chemical odors strong on NE side of Landfill
	FLOW MONITORING/RECORDING	NA	

Form DWR-083
3/81

NEW JE[illegible] DEPARTMENT OF ENVIRONMENTAL PROTE[illegible]ON
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

Permit # NJ1837
Date 1/10/90

PLANT DIAGRAM AND FLOW SEQUENCE:

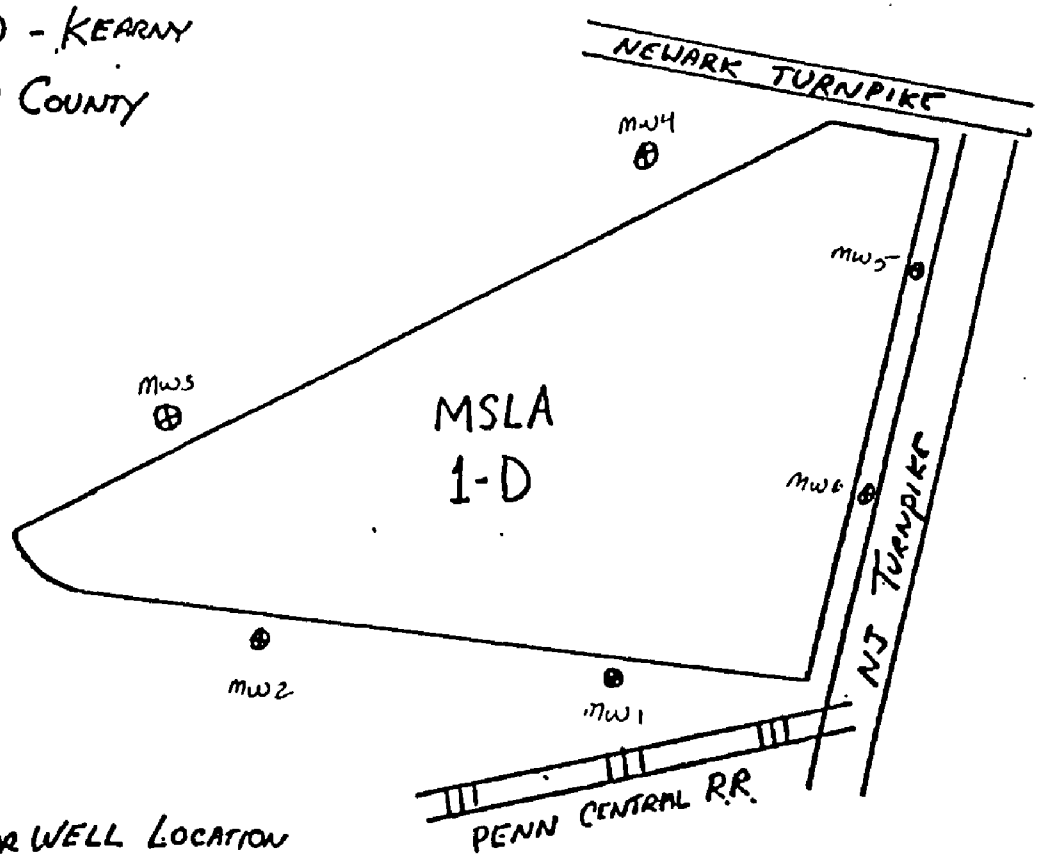
See Attached Diagram

SOURCE: 1/10/90 Sampled by E.P.A. DISCHARGE DATA PERIOD: Results Not Available At this time

DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA

MONITORING DEFICIENCIES: _____

MSLA 1-D - KEARNY
HUDSON COUNTY



⊕ MONITOR WELL LOCATION

NOT TO SCALE

NJ0051351
1/10/90

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

(201) 669-3900

March 8, 1991

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mayor and Council
Town of Kearny
402 Kearny Avenue
Kearny, NJ 07032

Re: Compliance Evaluation Inspection
MSLA 1-D Kearny Landfill
NJPDES No. NJ 0051837
Kearny/Hudson County

Gentlemen:

A Compliance Evaluation Inspection of your facility was conducted by a representative of this Division on February 15, 1991. A copy of the completed inspection report form is enclosed for your information.

Your facility received a rating of "UNACCEPTABLE" due to the following deficiencies:

1. The permittee is not sampling the six (6) ground water Monitoring Wells and submitting Monitoring Report Forms as required by Part I, Page 7, Condition g(1) of the site's NJPDES permit.

2. The permittee is not conducting weekly inspections of the Monitoring Wells or maintaining an inspection record as required by Part II, Page 3, Condition 9 of the site's NJPDES permit.

3. The permittee has not delineated all leachate discharges to the surface waters of the State as required by Part II, Page 4, Condition 18 of the site's NJPDES permit.

BAA000071

4. The two (2) wells located during the inspection did not have well permit numbers attached to the casing as required by Part II-F, Section 8 of the site's NJPDES permit.

5. The permittee failed to report the damage to Monitoring Wells 1, 2, 5 and 6 as required by Part II-F, Page 2, Condition 10 of the site's NJPDES permit. Monitoring Well 1 has a bent casing that may cause sampling difficulties, Monitoring Wells 2, 3, 5 and 6 could not be located during the inspection and are believed to have been accidentally demolished.

6. Contaminated runoff and leachate from the landfill collects in several locations around the base of the landfill and discharges to the surface waters of the State. This discharge is a unpermitted discharge to the surface waters of the State. The Town of Kearny must cease this discharge.

7. The permittee has failed to repair or replace the damaged wells as required by Part I Section 10 and Part II-F, Section 10.c of the site's NJPDES permit. Unusable wells must be sealed as required by Part I, SEction 10 of the permit.

8. The permittee failed to submit a completed permit renewal to the Department 180 days prior to the expiration date of the permit as required by Part I, Section 2.A.

9. The two (2) wells located during the inspection were not locked and did not have water tight inner caps as required by Part II-F, Section 5 and the Departments monitor well specifications.

Deficiencies 1 through 8 were noted in the directive letters to the Town of Kearny dated February 10, 1988, February 10, 1989 and February 28, 1990. As of this date the Town of Kearny has failed to correct these deficiencies.

The deficiencies noted above have placed your facility in significant violation of the terms and conditions of your NJPDES permit and/or the Water Pollution Control Act Regulations (N.J.A.C. 7:14A-1 et seq.). You are therefore DIRECTED to institute corrective measures. A written report concerning specific details of remedial measures to be instituted, as well as an implementation timetable, must be submitted to this Department and USEPA, Permits Administration Branch within thirty (30) calendar days of the date of this correspondence.

You are advised that the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.) provides for substantial monetary and criminal penalties in cases of permit violations.

Please direct all correspondence and inquiries to Deborah R. Cowell, the Senior Environmental Specialist responsible for this case, who can be reached at (201) 669-3900 or by letter through this Bureau.

Failure to fully comply with the above will result in the initiation of enforcement action by this Department. This shall in no way be construed, however, to indicate any exemption on your part from possible penalties for violations indicated by the Compliance Evaluation Inspection as stated above.

Very truly yours,

Stefan D. Sedlak
Section Chief
Landfill and Underground
Storage Tank Enforcement
Metro Bureau of
Regional Enforcement

E14:G25

c: Chief - Permits Administration Branch, USEPA
Mr. Patrick M. Durack, USEPA
Mr. Edward Grosvenor, Health Official
Mr. Barry Sutherland, Neglia Engineering Associates
Mr. Scott Tyrell, BAP

Enclosure

bc: Zaheer M. Hussain, Enforcement
James Lyko, Criminal Justice
Central File

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

DISCHARGE SURVEILLANCE REPORT

PERMIT # NJ0051837 NO. OF DISCHARGES 6MW CLASS —

DISCHARGER MSLA ID Kearny Landfill

OWNER Town of Kearny

MUNICIPALITY Kearny COUNTY Hudson WATERSHED CODE —

LOCATION Newark-Jersey City Turnpike (Between Rt 280 and NJ Turnpike)

RECEIVING WATERS Groundwater STREAM CLASS —

LICENSED OPERATOR & PLANT CLASS —

TRAINEE/ASSISTANT — OTHER INFO. (201)939-8805 (Neglia)

DEFICIENCIES OR COMMENTS 1) Monitor Wells are not being sampled and Monitoring Report forms have not been submitted. 2) Weekly well inspections have not been conducted and inspection Record has not been maintained. 3) Damage to Monitor Wells 1, 2, 5 and 6 was not reported. 4) Damage wells have not been replaced. 5) wells are not numbered or locked and do not have inner caps, 6) Leachate discharges have not been delineated 7) Permit renewal has not been submitted. 8) Unpermitted discharge of leachate to the land and surface waters of the state.

OVERALL RATING ☐ Acceptable ☐ Conditionally Acceptable ☒ Unacceptable

EVALUATOR Deborah R. Cowell TITLE Sr. Environmental Specialist

INFORMATION FURNISHED BY (Name) Barry Sutherland P.E.

(Title) Director of Engineering (Organization) Neglia Engineering Asso.

DATE OF INSPECTION February 15, 1991

Permit # NJ0051837

1-D

DISCHARGE SURVEILLANCE REPORT

Date 2/15/91

GROUND WATER DISCHARGE EVALUATION

RATING CODES: S = Satisfactory M = Marginal U = Unsatisfactory NA = Not Applicable

		RATING	COMMENTS
GENERAL	TYPE DGW		Landfill leachate
	RCRA FACILITY	—	
	DISCHARGE NUMBER	—	
	WASTEWATER SOURCE/FREQ.		Leachate
	PUMPS AND PIPING	NA	
	ALTERNATE POWER/ALARM	↓	
	BYPASS		
		↓	
MONITORING SYSTEM	WATER SUPPLY/MONITORING	NA	
	AQUIFERS MONITORED		Organic Mat + Clays of the Hackensack Meadows
	UPGRADIENT WELLS	U	2 of 6 wells were located - 1 had a bent casing
	DOWNGRADIENT WELLS	U	Both were not numbered and did not have inner caps
	SAMPLING PLAN	U	No Sampling is being Conducted
	SAMPLING PROCEDURES	U	"
	LAB CERTIFICATION	—	
	RECORDS	U	No Monitoring Reports or Inspection Record
	REPORTING	U	Monitor Report Forms are not being submitted
	Inspection Record	U	Wells are not inspected weekly
LTDMEERY MONITORED WELLS	DRILLING PERMIT NUMBERS	—	See below
	WELLS NUMBERED/IDENTIFIED	U	wells are not numbered
	LOCKS/INTEGRITY	U	wells are not locked
	ABANDONMENT PLAN	NI	monitor wells
	ELEVATION INFORMATION	↓	MW1 26-08003-6
	WATER LEVEL MEASUREMENT		MW2 26-08001-4
	TURBIDITY FREE		MW3 26-08005-2
	SUFFICIENT YIELD		MW4 26-08006-1
		↓	MW5 26-08007-9
			MW6 26-08008-7
UIC	CLASSIFICATION	NA	
	PERC./LEACHING PROBLEMS	↓	
	SOLVENTS/REPAIRS MADE		
	MAX. PRESSURE & VOLUME		
	CLOSEST USDW/SUPPLY WELLS		
	MOUND INTEGRITY/COVER	↓	
IMPOUNDMENT	LINING INTEGRITY	NA	
	EMBANKMENT INTEGRITY	↓	
	LEACHATE COLLECTION SYS.		
	SOLIDS BUILDUP/REMOVAL		
	HEIGHT TO FREEBOARD		
	APPEARANCE		
		↓	
LAND APPLICATION/ SPRAY SYSTEM	EVEN DISTRIBUTION	NA	
	PONDING/RUNOFF/EROSION	↓	
	SPRAY HEADS		
	DISCING		
	COVER CROP		
	APPEARANCE		
	BUFFER ZONE		
	SLUDGE STOCKPILED		
		↓	
OTHER	SEEPAGE/LEACHING	U	Leachate discharges to surface water
	ODOR/AEROSOLS	U	Methane and chemical odors. Some cracks in the landfill
	FLOW MONITORING/RECORDING	NA	strong on Top

NEW JE[illegible] DEPARTMENT OF ENVIRONMENTAL PROTE[illegible]N
DIVISION OF WATER RESOURCES
CN 029, Trenton, N.J. 08625

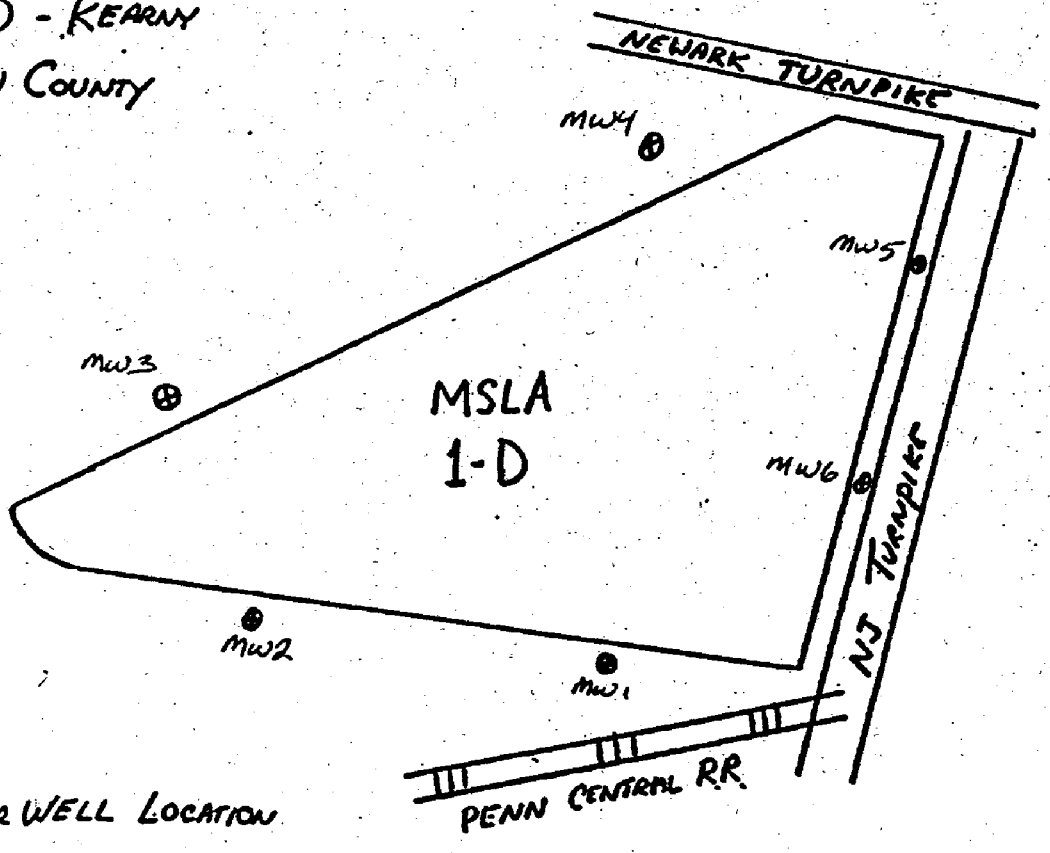
1-D

DISCHARGE SURVEILLANCE REPORT

Permit # NJ0051837
Date 2/15/91

DIAGRAM AND FLOW SEQUENCE:

MSLA 1-D - KEARNY
HUDSON COUNTY



⊕ MONITOR WELL LOCATION

NOT TO SCALE

SAMPLES TAKEN

DISCHARGE DATA

E: _____ PERIOD: _____

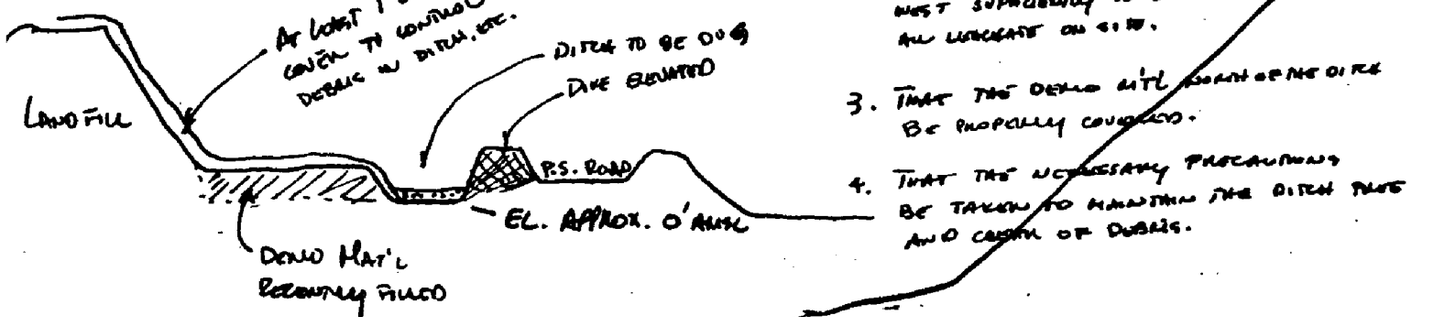
ARA	SAMPLE TYPE	PERMIT LIMITS	DATA	DIS	PARA	SAMPLE TYPE	PERMIT LIMITS	DATA

ORING DEFICIENCIES: _____

SYSTEM AS BEING INSTALLED DURING INSPECTION OF 5/14/76

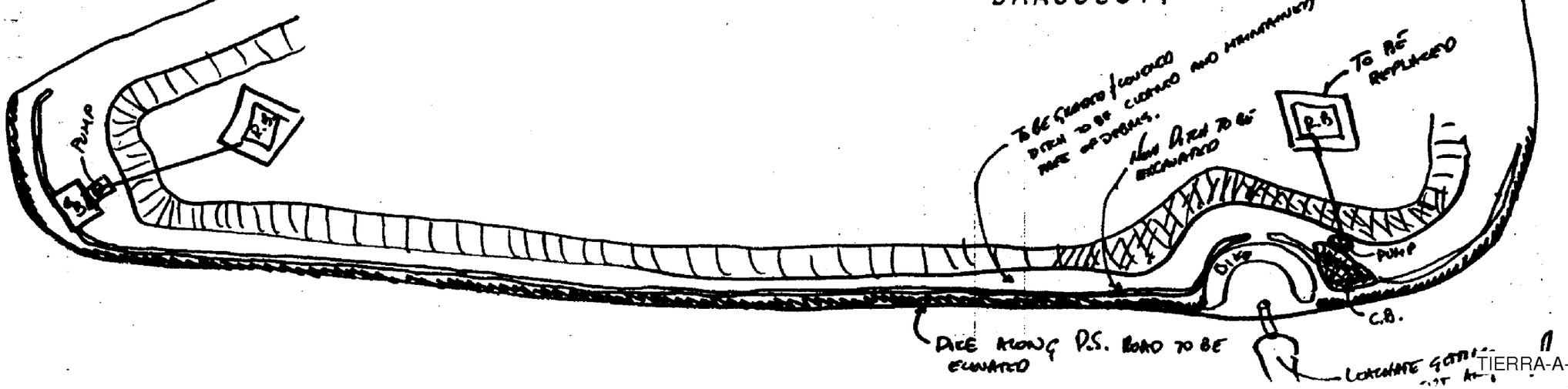
ALTHOUGH THE IDEA SEEMS THEORETICALLY GOOD, THE FOLLOWING MUST BE ADHERED TO TO MAKE IT ACCEPTABLE:

1. DIKE ALONG P.S. MUST BE ELEVATED FROM GOOD GROUND... NOT PLACED ON GARBAGE AS WAS EVIDENT DURING INSPECTION.
2. THAT DIKE BE ENGINEERED RIGHT AND MUST SUFFICIENTLY TO CONTAIN ALL LEACHATE ON SITE.
3. THAT THE DEBRIS WITH SOUTH OF THE DIKE BE PROPERLY COVERED.
4. THAT THE NECESSARY PRECAUTIONS BE TAKEN TO MAINTAIN THE DITCH FREE AND CLEAN OF DEBRIS.



CROSS SECTION

BAA000011



BAA000011

Hackensack Meadowlands Development Commission
1099 WALL STREET WEST • LYNDHURST, NEW JERSEY 07071 • (201) 935-3250

PATRICIA Q. SHEEHAN
Chairman

WILLIAM D. McDOWELL
Executive Director

June 18, 1976

Mr. Roger Generazzo
Municipal Sanitary Landfill Authority
1500 Harrison Avenue
Kearny, New Jersey

RE: MSLA, FILE 71-175

Dear Mr. Generazzo:

On June 17, 1976, this Office conducted inspections of the MSLA Sites I-A, I-C and I-D, in Kearny. Based on the above, this Office found the following disturbing conditions:

(1) All work has ceased on the drainage and leachate control system along the southerly property line of Site I-D. Specifically, since our last joint inspection, no further covering of the slopes or drainage area has been completed. In addition, the new drainage ditch has been only partially dug and abandoned. Further, the clean fill piled up just south of the new ditch is ineffective as diking, since it is dumped directly over the demo fill. As a result, leachate continues to escape the site through the demo material, and by way of ditches that have been dug to the property south of the PSE&G right-of-way.

We anticipate that work will immediately resume in order that this problem may be corrected as soon as possible.

(2) Active filling on Site I-C has progressed to the easterly slope of the site, along the PSE&G powerline right-of-way. However, the required 50' plateau is not being maintained along that slope and the stakes marking the setback

BAA000015

have been removed. Therefore, you are hereby ordered to cease all dumping in the vicinity of the east slope, to immediately stake out a 50' wide plateau from the top of the existing slope and to adhere to the required setbacks during all future filling.

Further, enclosed is a copy of the approved complaince schedule which has been marked to indicate those additional items with which this Office has found deficiencies. We anticipate that you will give all these items your prompt attention in order that they may be resolved as soon as possible.

If there are any questions, please do not hesitate to contact this Office.

Sincerely,

OFFICE OF THE CHIEF ENGINEER

GEORGE D. CASCINO, P.E., P.P.
CHIEF ENGINEER

MA/jo

cc: Dennis Backus, P.E.
Kenneth D. McPherson, Esq.
Mark L. First, Esq., DAG

THOSE DEADLINES UNDERLINED HAVE NOT BEEN MET

MUNICIPAL SANITARY LANDFILL AUTHORITY COMPLAINCE SCHEDULE

START	DEADLINE COMPLETE	
		SITE I-A
	4/1/76	Bimonthly to 1/1/79 - Water Sampling (bi-monthly)
2/1/76	7/1/76	Complete final cover (2') entire site should be completing.
2/1/76	7/1/76	Construct and/or recondition swales for drainage should be completing.
	8/1/76	Seed entire site
	1/1/77	Install methane vents - should be starting.
	1/1/77	Submittal of diking plan, if necessary.
		SITE I-D
IMMEDIATE	IMMEDIATE	Water and methane sampling (monthly)
2/1/76	3/1/76	Re-install leachate pumps 1 and 2 pump on southwest corner removed.
2/1/76	3/1/76	Construct collection and recharge basins - must be reconditioned.
2/1/76	7/1/76	Construct barrier berms.
	7/1/76	Site shall become Inactive.
2/1/76	7/1/76	Final covering shall be complete (2') - not started.
2/1/76	7/1/76	Construct new south swale and ditch - has been abandoned
2/1/76	8/1/76	Install methane vents - not started
7/1/76	9/1/76	Seed entire site.
	DEADLINE	**SITE I-C**
IMMEDIATE	IMMEDIATE	No filling within 200' of P.S.E. & G Company right-of-way (50' plateau) or within limits of HMDC Sawmill Park Landfill Extension. (both limits should be staked immediately) Has been violated ... shall be re-staked and maintained.
2/1/76	3/1/76	Clean drainage ditch along Belleville Turnpike side of site - only started recently.
	4/1/76	Water sampling (monthly)
2/1/76	4/1/76	Block all drainage pipes under P.S.E.& G. towers

MUNICIPAL SANITARY LANDFILL AUTHORITY COMPLIANCE SCHEDULE CONTINUED

START	COMPLETE	SITE I-C
3/1/76	4/1/76	Install leachate pumps (along P.S.E. & G side) construct collection and recharge basins.
3/1/76	4/1/76	Construct dikes 3 & 5 (P.S. side-south and north of site).
4/1/76	6/1/76	Construct flood gates 1,2,3,&4 (southeast corner under P.S. line for Belleville Ditch)
2/1/76	7/1/76	Construct swales P.S. side (clean ditch?)
	7/1/76	Construct new bridge from Belleville Pike.
6/1/76	7/1/76	Install leachate pumps #3 & #4 (Dike #6 at north tip should be complete - no deadline established).
	9/1/76	Methane samples - monthly
	1/1/77	Revised topos due.
2/1/76	1/1/77	Install methane vents
4/1/76	4/1/77	Elevate dike #4 (or construct new dike on property)
4/1/76	4/1/77	Construct Dikes 1 & 2
9/1/76	5/1/79	Construct barrier berm (Belleville Side)
	5/1/79	Construct barrier berm (P.S.E.&G Side)

THE DEADLINES UNDERLINED HAVE NOT BEEN MET !

COMPLIANCE SCHEDULE (MSLA)

START	Deadline COMPLETE	
		SITE I-A
	4/1/76	Bimonthly to 1/1/79 - Water Sampling (Bi-Monthly)
2/1/76	7/1/76	Complete Final Cover (2') Entire Site SHOULD BE COMPLETING
2/1/76	7/1/76	Construct and/or Recondition Swales for Drainage SHOULD BE COMPLETING
	9/1/76	Seed Entire Site
	1/1/77	Install Methane Vents SHOULD BE STARTING
	1/1/77	Submittal of Diking Plan, if necessary.
		SITE I-D
IMMEDIATE	Immediate	- Water and Methane Sampling (Monthly)
2/1/76	3/1/76	Re-install leachate pumps 1 and 2 PUMP ON SOUTH-WEST CORNER RELOCATED
2/1/76	3/1/76	Construct Collection and Recharge Basins MUST BE RECONDITIONED
2/1/76	7/1/76	Construct Barrier Berms
	7/1/76	Site shall become Inactive
2/1/76	7/1/76	Final covering shall be complete (2') NOT STARTED

DECLARATION STATEMENT

REMEDIAL ACTION PLAN

MSLA 1D LANDFILL SITE

SITE NAME AND LOCATION

MSLA 1D Landfill Site located in the Town of Kearny, Hudson County, New Jersey

STATEMENT OF BASIS AND PURPOSE

This Remedial Action Plan presents the selected on-site remedial action for the MSLA 1D Landfill Site located in the Town of Kearny, Hudson County. The investigations which led to this Remedial Action Plan were developed pursuant to the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11a et. seq. (Spill Act). This Remedial Action Plan explains the factual and legal basis for selecting the remedy for this site.

The information supporting this remedial action decision is contained in information repositories which have been established for this site. This Remedial Action Plan contains a Declaration Statement and Decision Summary.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Remedial Action Plan, present an unacceptable risk to public health, welfare, and the environment.

DESCRIPTION OF THE SELECTED REMEDY

The remedial actions described in this document for on-site contamination are divided into two operable units. The first will address landfill leachate. Contaminated leachate has been identified as posing the greatest threats to the human health and the environment. In order to stop the uncontrolled flow of leachate from the landfill into the ground water and adjacent wetlands, a subsurface barrier wall with a leachate collection system will be constructed. The barrier wall will contain the leachate within the footprint of the landfill and a collection system will convey it to the sewage treatment plant for disposal.

This second operable unit will involve capping of the landfill in order to minimize leachate production, manage landfill gases, and to encapsulate contaminated materials on the landfill. The cap will include a methane gas collection system and storm water management controls.

The major components of the proposed remedial actions include the following:

- Construction of a subsurface barrier wall around the landfill to contain leachate.

- Construction of a leachate collection trench on the inboard side of the barrier wall to convey leachate to pump stations and the sewerage treatment plant.
- Regrading of the landfill to promote stormwater runoff.
- Covering the waste materials with an impermeable, solid waste type cap.
- Implementation of storm water management and soil erosion controls.
- Collection of landfill gas under the cap for processing or flaring.
- Fencing and posting of the site.
- Long-term performance monitoring and maintenance of the remedy to insure its effectiveness.

DECLARATION OF STATUTORY DETERMINATIONS

The selected remedy is protective of human health and the environment and complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action. The remedy will employ technologies that are routinely used at landfills in the area, and throughout New Jersey. Once implemented, the goals of the remedy will be achieved immediately. The most cost-effective methods and materials that meet design criteria will be utilized. Construction controls will also be put into practice that to minimize impacts to the surrounding community and the environment.

Richard J. Gimello, Assistant Commissioner
Site Remediation Program
New Jersey Department of Environmentlal Protection

11/10/99
Date

DECISION SUMMARY

MSLA 1D LANDFILL SITE

1. INTRODUCTION

This Remedial Action Plan presents the selected remedy for onsite contamination at the MSLA 1D Landfill Site located in the Town of Kearny, Hudson County. This document is issued by the New Jersey Department of Environmental Protection (NJDEP) and presents the factual and legal basis for the actions proposed herein to address contamination at the site.

This Remedial Action Plan is being issued under the authority of: N.J.S.A. 58:10-23.11a et. seq., entitled the Spill Compensation and Control Act; N.J.S.A. 58:10B-1 et. seq. concerning the remediation of contaminated properties; and N.J.S.A. 58:10A-1 et. seq., entitled the Water Pollution Control Act. The remedy presented in this Plan was developed pursuant to N.J.S.A. 13:1E-1 et. seq., entitled the Solid Waste Management Act, and in accordance with: N.J.A.C. 7:26-2A et. seq. which governs the closure and post-closure care of sanitary landfills, and N.J.A.C. 7:26E, entitled Technical Requirements for Site Remediation, which governs the selection of remedial actions. The remedy selected in this Plan is, to the extent possible, in accordance with the Federal National Oil and Hazardous Substances Contingency Plan (NCP), 40 C.F.R., Part 300

The information supporting this remedial action decision is contained in the record repositories for this site. This Remedial Action Plan contains a Decision Declaration and a Decision Summary.

2. SITE DESCRIPTION

The MSLA 1D Landfill is located near Exit 15 W of the NJ Turnpike, at 1500 Harrison Avenue, in the Town of Kearny, Hudson County (Figure 1). It is situated primarily on a 93.8 acre tract of land designated as Block 285, Lot 2, which is owned by the Town of Kearny (Figure 2).

The MSLA 1D Landfill lies within an area classified as the Hackensack Meadowlands District. Within the District are over 400 acres of wetlands that provide valuable habitat for a wide variety of fish and wildlife species. They also provide for flood control, filtering of pollution, recreation, and educational opportunities. Development within the District is governed by the Hackensack Meadowlands Reclamation and Development Act. The Hackensack Meadowlands Development Commission (HMDC) has planning and zoning authority within the District to the end of promoting a balance between economic growth and the environment. The landfill property is currently zoned SU-3, Special Use. SU zoning is designed to accommodate special uses of regional importance.

The landfill property is triangular in shape. It is vacant except for a landfill gas recovery and processing facility operated by GSF Energy, Inc, a Division of the EcoGas Corporation. The landfill is boarded on the east by wetlands, a TRANSCO gas pipeline easement, and the NJ

Turnpike Passaic River Viaduct. To the south are PSE&G and TRANSCO gas pipelines and a wetland that is connected to the Passaic River by culverts under NJ Transit Rail Lines. Wetlands and a NJ Department of Transportation right-of way bound the northwest side of the triangular lot. On the west side, the adjacent property is being used for storage of heavy and construction equipment.

Dark-colored, odorous leachate can be observed flowing from seeps in the landfill into adjacent wetlands on the south and east sides. On the north side, leachate seeps discharge along the curbline of Harrison Avenue. The flow of leachate out of the landfill is estimated to be several hundred thousand gallons per day. Leachate contaminated water in the wetlands is free to flow through a culvert on the south side of the site into the Passaic River which flows into the Newark Bay. The distance from the Passaic River to the site is less than 1000 feet.

GSF Energy, Inc. operates a number of gas extraction wells on top of the landfill. Gas is piped from the wells to their plant at the toe of the landfill, processed, mixed with gas extracted from other nearby landfills, and then conveyed along the eastern side of the landfill to a connection with a Public Service Gas and Electric Company Pipeline.

Subsurface conditions at the site can be described in terms of six strata. The refuse fill material rises some 110 feet above the surrounding land. Under the refuse is a thin stratum of organic peat which is considered to represent the original wetland soils. Based on soil boring information, the organic peat is underlain by a gray sand stratum which is 20 to 30 feet thick. Below this is a stratum of finely-layered (varved) sand and silt, approximately 25 feet thick, which is underlain by a stratum of clayey silt, sand and gravel, approximately 20 feet thick. Underlying the overburden soils is red brown shale bedrock (e.g. the Brunswick Formation).

Presently, ground water usage in the area is limited to industrial purposes. All municipalities within 3 miles of the site draw their drinking water from the Wanaque Reservoir, located in northern Passaic County, or from other reservoirs. There are nine industrial wells within 3 miles of the site, the nearest being approximately 0.8 mile southwest. This later well withdraws water from the stratum overlying the bedrock. Seven other wells within a 3-mile radius of the site draw water from the Brunswick Formation. Reported yields of these wells are as much as 600 gallons per minute (gpm), and the median yield is reported to be 100 gpm.

3. SITE HISTORY AND ENFORCEMENT ACTIVITIES

A 1955 topographic map and aerial photographs from 1961-1962 of the area around the site show it to be primarily wetlands. A 1971 aerial photograph shows landfilling of construction and demolition debris in the southwestern portion and sanitary waste in the northeastern portion of the site. Portions of the site have been filled to accommodate connections between Route I-280 and Harrison Avenue. In the 1970s, the landfill property was leased by the Town of Kearny, who owned the land, to the Municipal Sanitary Landfill Authority (MSLA). In 1977, the MSLA obtained Certificate of Registration No. 0907C from the NJDEP allowing the site to be used for landfilling. By 1978, aerial photographs show that the majority of wetlands had been filled. It is

documented that more than 4 million tons of solid waste were disposed at the landfill between 1977 and 1979, at which time it was closed. A significant volume of waste oil, estimated at approximately 1.5 million gallons, was also disposed of in the landfill. In addition, a variety of industrial-type wastes were reportedly disposed of and are listed as follows:

Sludge Waste (unknown content)	Wet Gas Scrubber Sludge	Dredge Material
Pharmaceuticals	Filter Cake (lime-based)	Insecticides
Plastic Resins (solid)	Asphaltic Bottoms	Deodorants
Activated Charcoal Sludge	Filter Cake (sewer sludge)	Wax (solid)
Construction Debris	Fuel Oil	

The landfill was reopened again between 1981 and 1982, but was never properly closed. The final cover was insufficient and the leachate collection and monitoring systems were not operating. Throughout its operation of the landfill, the MSLA was cited with various violations. Under administrative order from the NJDEP the landfill ceased operations in 1982 due in part to the fact that it had reached its maximum allowable height and that the MSLA had failed to maintain the leachate collection system.

Since the end of the 1980s up to the present, GSF Energy, Inc has operated a landfill gas extraction and processing facility at the site. In addition to processing gas from the 1D Landfill, gas is extracted and piped to the facility from two other MSLA Landfills nearby. Once processed, the gas is piped along the eastern side of the landfill and into a PSE&G pipeline line in the southeastern corner of the site.

There have been a number of problems at the landfill since it ceased operations 1982. In 1987, a NJDEP site inspection observed large, open cracks in the top of the landfill. There was immediate concern that a possible slope failure was underway. Monitoring and slope stability analyses by the State, PSE&G and the New Jersey Turnpike Authority lead all to conclude that the landfill was stable and surface cracks were due to internal settlement. Later, in 1995, a fire developed at the site covering a 10 to 20 acre area. The Town of Kearny estimated their cost to extinguish the fires at up to $500,000 and requested State aid from the Governor. Vegetation at the site is not mowed or maintained and the potential for fires is always present.

In 1986, the USEPA's contractor, Malcolm Pirnie, Inc, performed a Preliminary Assessment of the site. The Report recommended a site inspection to assess the quality of the leachate. In 1990 the USEPA's contractor, NUS Corporation, performed sampling and investigations and issued a Site Investigation Report. The findings of this Report are summarized in Section 5 of this Remedial Action Plan.

Berms are present along the toe of the landfill on all sides. Apparently, these were constructed by MSLA to contain leachate seepage out of the landfill. Leachate would pond behind the berms and then be pumped up onto the landfill or discharged into wetlands flowing into the Passaic River. Since the MSLA ceased operations at the landfill, the leachate overflows the berms into the adjacent wetlands.

Due to lack of a viable party at this time to undertake the proper closure measures, the NJDEP is proceeding to perform the work described in this Remedial Action Plan using public funds.

4. PUBLIC NOTICE

The NJDEP has provided public notice in the Jersey Journal newspaper of its intent to remediate the site. A toll-free telephone number and mailing address is provided for questions and further information.

The selection of the remedy in this Plan is based on three key documents: (1) "Potential Hazardous Waste Site Preliminary Assessment", dated May 22, 1986, by Malcolm Pirnie, Inc; (2) "Final Draft Site Inspection Report", dated June 29, 1990, by the NUS Corporation, which provides background information and the results of sampling at the site; and (3) "Background Investigation and Design Recommendation Report", dated July 1999, by Louis Berger and Associates, Inc, which also provides background information and describes the remedial measures to be implemented. These documents, and other site-related information, can be found at the following location:

New Jersey Department of Environmental Protection
P.O. Box 413,
401 East State Street
Trenton, New Jersey 08625-0413
Contact: Ms. Mindy Mumford, Community Relations Coordinator
Bureau of Community Relations
Phone: 1-800-253-5647

The NJDEP has also established information repositories that contain the most important site-related documents at the following locations:

Kearny Public Library
318 Kearny Avenue
Kearny, NJ
Contact Nancy Smith, Reference Librarian
201-998-2666

Hackensack Meadowlands Development Commission
One DeKorte Park Plaza
Lyndhurst, NJ
Contact Mr. Thomas R. Martarano, Director of Solid Waste and Engineering
201-460-1700

The NJDEP encourages the public to review these documents in order to gain a more comprehensive understanding of the site, the activities that have been conducted, and the basis for the remedy selected herein.

5. SITE CONTAMINATION

Information about the nature and extent of contamination at the site can be found in the "Final Draft Site Inspection Report", dated June 29, 1990, by the NUS Corporation (NUS). NUS personnel collected ground water, surface soil, surface water, sediment, and leachate samples for the US Environmental Protection Agency. Samples were analyzed for priority pollutant organic chemicals and metals.

The Sample Location Map is included as Figure 3. Sampling results from the NUS Report are presented in Tables 1 through 5 and are compared to NJDEP standards.

5.1 GROUND WATER

The aquifers underlying the site are classified as Class II-A in the New Jersey Ground Water Quality Standards (GWQS), N.J.A.C. 7:9-6. Class II-A ground water aquifers are designated as suitable for potable water supply. Hazardous organic and inorganic compounds were detected in the ground water at the site at concentrations above Class II-A GWQS as shown in Table 1.

One ground water sample was obtained from an existing well (Well No. MW-3 in the NUS Report) installed in the shallow, overburden aquifer on the west side of the site. Two volatile organic compounds were detected above GWQS as follows: chlorobenzene at 58 parts per billion (ppb) and total xylenes at 1,100 ppb. Inorganic analyses also detected aluminum, barium, chromium, iron, lead, manganese, nickel, and sodium at levels exceeding GWQS.

The depth to ground water at the site is relatively shallow. Water levels in on-site monitoring wells installed along the base of the landfill ranged from 2.5 to 9 feet below ground surface during the NUS sampling events. This shallow, unconsolidated aquifer is composed of recent organic sediments at the top and glacially deposited material with depth. The shale bedrock aquifer begins approximately 70 feet beneath the ground surface. Although the primary permeability of the shale is low, appreciable amounts of water are found in joints and fractures. The shallow ground water flow direction at the site is radially outward due to the large mound of leachate in the landfill. Shallow ground water discharges locally into adjacent wetlands and surface water bodies. There is no evidence that the landfill was constructed with a bottom liner, therefore, leachate is free to drain out of the waste materials and directly into ground water.

5.2 LANDFILL LEACHATE

Five samples were taken from leachate ponds or seeps along the toe of the landfill. Sample analytical results are presented in Table 2 and compared to New Jersey Surface Water Quality Criteria (SWQC), N.J.A.C. 7:9-4 et seq for Saline Estuary, SE-type waters. Levels of polynuclear aromatic hydrocarbons (ie. pyrene, flouranthene, benzo(a)anthracene, chrysene, benzo(b)flouranthene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene) were detected at levels above SWQC which are protective of human health. The pesticides beta-BHC, 4-4'-DDD, 4-4'-

DDE, and 4-4'-DDT were all detected in leachate at levels above SWQC which are protective of human health. Analyses for inorganic compounds also detected metals at levels exceeding SWQC for protection of human health or aquatic life including: arsenic at 7.3 ppb, lead at 1250 ppb to 1,250 ppb, zinc at 2360 ppb, chromium at 262 ppb, copper at 490 ppb, and mercury at 2.6 ppb (concentrations are qualified as estimated).

5.3 SURFACE WATERS AND SEDIMENTS

The Passaic River in the vicinity of the site is classified as Saline Estuary (SE) in the New Jersey Surface Water Quality Standards (SWQS), N.J.A.C. 7:9-4 et seq. SE-type waters are designated for the maintenance and migration of fish populations, the migration of diadromous fish, secondary contact recreation, the maintenance of wildlife, and any other reasonable uses.

Only one surface water sample was taken from the wetland on the northeast side of the landfill. Sample analytical results are presented in Table 3. Benzene and chlorobenzene were the only organic contaminants detected, both at concentrations of 3 ppb. Inorganic contaminants were also detected. Arsenic and mercury were detected at levels exceeding saltwater SWQS for the protection of human health. The following metals were also detected at concentrations exceeding saltwater SWQC for the protection of aquatic life: copper at an estimated 1,500 ppb; lead at 1,050 ppb; mercury at an estimated 2.0 ppb; nickel at an estimated 222 ppb; and zinc at an estimated 1,070 ppb.

Sediment samples were taken from two locations as shown in Figure 3. Sample analytical results are presented in Table 4. No promulgated standards exist for sediment quality. Sediment results were compared to published criteria in the "Guidance For Sediment Quality Evaluations", NJDEP, dated November 1998.. A sediment sample taken in the wetland northeast of the landfill detected the following semi-volatile organic compounds at levels above "Low Effects Range" screening level where adverse benthic impacts have been observed in 10% of the studies: fluoranthene at 1,700 ppb; pyrene at an estimated 2,400 ppb; benzo(a)anthracene at 1,600 ppb; chrysene at 2,000 ppb; benzo(a)pyrene at 2,200 ppb; indeno(1,2,3-cd)pyrene at 1,800 ppb; and benzo(g,h,i)perylene at 1,600 ppb. Also detected above the sediment screening criteria was the following pesticide 4,4'-DDT at an estimated 67 ppb. Inorganic analyses also detected arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc above NJDEP sediment screening criteria.

5.4 SOILS

Analytical results are available in the NUS Corporation's Site Inspection Report for five surface soil samples taken around the perimeter of the landfill. Table 5 lists the compounds detected and compares them to NJDEP Soil Cleanup Criteria (SCC). The SCC are guidelines used by the NJDEP to determine if remediation is necessary. The non-residential SSC and the SSC for protection of ground water are applicable to the site at the present time. The non-residential criteria were developed to be protective of human health based on an ingestion pathway. The ground water SSC were developed to protect the potability of the underlying aquifer from

contaminants that might leach out of the soils.

Three volatile organic compounds were detected in the soils: chlorobenzene, ethylbenzene, and xylenes. Polyaromatic hydrocarbons (PAHs) were also detected, including benzo(a)pyrene at 750 ppb, which exceeds the SSC for non-residential direct contact. Pesticides were detected including: beta-BHC; 4,4'-DDT, methoxychlor, and 4,4'-DDE. Metals were detected in soil samples including: arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc.

In addition to chemical compounds detected in the soils, previous site investigations have observed wastes on the surface of the site. These include medical wastes, chemical drums, and large tanks.

5.5 Air

Gaseous emissions from the landfill are controlled to some degree by the gas extraction system in operation on top of the landfill. During site visits by NJDEP personnel in 1999, foul odors were noted in areas where leachate is seeping from the side of the landfill or where it is ponded.

6. SUMMARY OF SITE RISKS

The remedy selection rationale in this Remedial Action Plan follows the Presumptive Remedy approach presented in the USEPA Directive No. 9355.0-49FS, entitled "Presumptive Remedy for CERCLA Municipal Landfill Sites." This streamlined approach, as used herein for municipal landfills, consists of identifying chemicals present in ground water, sediments, and surface water, and comparing them to standards for those media which may be applicable or relevant and appropriate requirements (ARARs). Those chemicals that exceeded ARARs for a given pathway are considered to require remedial action. A detailed calculation of risk factors to human health or the environment was not performed. Under the Presumptive Remedy approach, any contaminant exceeding a chemical-specific ARAR is assumed to result in a site risk.

Tables 1-5 compare the levels of contaminants detected in ground water, leachate, surface water, sediments, and soils with State ARARs. As shown, the ground water quality at the site is contaminated above levels determined to be protective of human health based on potable use. Surface water and sediments in the wetlands are also degraded by landfill leachate above standards established for the protection of human health and/or aquatic life. Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Remedial Action Plan, may present an imminent and substantial endangerment to public health, welfare, or the environment.

7. REMEDIAL ACTION SELECTION

This Remedial Action Plan was developed with the goal of attaining the following objectives for on-site contamination:

- Prevent leachate contamination of the ground water above New Jersey Ground Water Quality Standards for Class II-A aquifers.
- Prevent leachate contamination of adjacent wetlands and surface water bodies.
- Control landfill gas emissions
- Prevent human or animal direct contact with contaminated materials

The rationale for this remedy selection follows the USEPA Presumptive Remedy approach for municipal landfills. Title 40 C.F.R. Section 300.430(a)(iii)(B) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) contains the expectation that engineering controls, such as containment, will be used where treatment is impracticable. The preamble to the NCP identifies municipal landfills as a type of site where treatment of the waste may be impracticable because of the size and heterogeneity of the contents (55 Federal Register 8704, 1990). Because treatment is usually impracticable for a landfill, containment is considered to be the appropriate response action, or the "Presumptive Remedy." The presumptive remedy for municipal landfill sites consists primarily of the containment of the landfill mass, collection and/or treatment of landfill gas, and measures to control leachate. Use of the presumptive remedy also eliminates the need for an initial identification and screening of remedial alternatives.

Landfill capping upon closure is standard engineering practice in New Jersey. The construction of a subsurface barrier wall in combination with a leachate collection system is a proven method of leachate control at other landfills in the area, such as the MSLA 1A Landfill and the MSLA 1E Landfill. These measures have been constructed by the HMDC and have been operating successfully for several years. The successful implementation and performance of these barrier wall projects in nearby areas of similar geology, with comparable landfills, is a factor in the NJDEP's selection of this remedy.

8. SCOPE AND ROLE OF REMEDIAL ACTIONS

As with many hazardous waste site cleanups, the problems are complex. As a result, the NJDEP has organized the work into two separate actions or operable units.

Operable Unit 1:	Leachate control to mitigate contamination of surface water and ground water.
Operable Unit 2:	Landfill capping to control gas emissions, prevent direct contact with contaminated materials, and reduce leachate generation.

Before landfill capping, leachate control measures will be implemented. The landfill is daily discharging thousands of gallons of contaminated leachate into the ground water and the surrounding wetlands. This represents the most visible and direct threat to human health and the environment. Leachate control measures are considered to be a first priority. Also, historically, there has been concern about the stability of the MSLA 1D Landfill. The initial installation of a leachate collection system will allow the landfill to dewater to some degree and increase in stability prior to adding the additional weight of a cap. Excavations for the barrier wall will generate considerable volumes of soil which will be disposed of on top of the landfill and will

require proper grading and capping which will follow under Operable Unit 2 - Capping.

The second operable unit will consist of a low permeability cap over the landfill, including a landfill gas collection system. A cap will control stormwater infiltration into the landfill which results in leachate production. Additional benefits include the control of gas emissions and prevention of direct contact of humans and animals with exposed, contaminated materials. Design of a landfill cap can begin once the leachate control measures are under construction.

Once these measures are implemented, on-site contamination will be contained from impacting off-site areas. Remediation of off-site contamination is not considered in this Remedial Action Plan and will be studied and handled separately, if necessary.

9. REMEDIAL ACTION DESCRIPTION

The two operable units which are proposed for on-site remediation are described in detail in this section.

9.1 LEACHATE CONTROL

A subsurface barrier wall is proposed to enclose the waste material. The wall will be keyed into the varved sand, silt, and clay formation at depths of approximately 50 feet. On the landfill side of the wall, a leachate collection trench will be installed at a level below the off-site ground water table elevation. It will convey leachate contained within the wall to a pump station to be built onsite. From there the leachate will be piped to a pump station at the MSLA 1A Landfill which is owned by the Kearny Municipal Utilities Authority (KMUA). There it will be combined with leachate from the MSLA 1A and MSLA 1E Landfills and disposed of into the sewer system for conveyance to the Passaic Valley Sewerage Commission's (PVSC) treatment plant. These actions will contain, collect, and dispose of the landfill leachate to prevent its migration into off-site ground water and its discharge into surface waters and wetlands.

Construction and quality control requirements for subsurface barrier walls and leachate collection systems are provided in New Jersey Division of Solid and Hazardous Waste Regulations, N.J.A.C 7:26-2A.7. The wall will be keyed into the underlying low-permeability formation to a depth of at least three feet. Based on available geological information, this formation, in combination with the barrier wall, will effectively cut off any lateral or downward leachate migration.

To facilitate construction of the subsurface wall and leachate collection system, clearing and grading of portions of the site will be required. A stable, level, working platform for the equipment used to install the subsurface wall will be constructed around the base of the entire landfill. Upon completion of the wall, this platform will be converted into an access road to allow for operations and maintenance. In addition, a construction laydown area will be established for the processing and storage of barrier wall materials. Excess waste and soils from wall construction and other work will be taken to the top of the landfill, graded out, and covered in accordance with Division of Solid and Hazardous Waste Regulations. This material will be capped when construction of the second

operable unit occurs.

During construction, some wetlands around the site may require filling to allow access for equipment. A wetlands mitigation plan will be developed to address wetlands impacted by the remedial measures.

To further protect human health from contact with contaminated materials on site, the property will be fenced and posted. This will also safeguard the remedial measures from vandalism.

All necessary permits and approvals will be obtained for construction including, but not limited to, those from: HMDC, Hudson-Essex-Passaic Counties Soil Conservation District, State of New Jersey, Kearny Municipal Utilities Authority, Passaic Valley Sewerage Commission, and the Town of Kearny. NJDEP permits include those for wetlands disruption, sewer connection, well drilling, treatment works approval, and landfill disruption.

Post-closure care is required for a minimum of 30 years. Maintenance work would be scheduled at regular, periodic intervals. At a minimum, fencing, monitoring wells, and the leachate collection, pumping and conveyance systems would require periodic inspection. To insure that the barrier wall and leachate collection system, once constructed, continue to function properly over time, a network of monitor wells will be installed on either side of wall. Water levels in wells on either side of the wall will be monitored to insure that an inward hydraulic gradient is developing (after initial installation of the wall) or is maintained (during long-term monitoring). Under these conditions, any leakage through the wall will consist of clean ground water from outside the wall. Locations, parameters, and frequencies for monitoring will be developed in detail during the design of the remedy.

The construction, operation and maintenance, and total present worth (over a 30 year period, using a 5% discount rate) costs for the subsurface barrier wall and leachate collection system were estimated as follows, assuming that the cutoff wall can be constructed of soil mixed with bentonite clay:

Capital Cost	$ 12,000,000
Annual O&M Costs	$ 550,000
Total Present Worth Costs	$ 20,500,000

If, during design, it is determined that physical constraints, such as limited workspace, or the incompatibility of the leachate with the soil/bentonite mixture require the use of more expensive techniques, such as a watertight sheet piling wall or a geomembrane panel wall, the costs are estimated as follows:

Capital Cost	$ 17,000,000
Annual O&M Costs	$ 550,000
Total Present Worth Costs	$ 25,500,000

The construction materials and methods to be used for the subsurface wall will be determined during the design phase. The most cost-effective solutions that meet design criteria will be selected.

9.2 LANDFILL CAPPING

The proposed landfill cap will be a solid waste type cover with a low permeability liner. The existing landfill cap is inadequate as evidenced voluminous amounts of leachate that flow out of the landfill. The New Jersey Division of Solid and Hazardous Waste Regulations, N.J.A.C 7:26-2A.7, require that the final cover system be designed and constructed to minimize long-term infiltration and percolation of liquid into the landfill throughout the closure and post-closure periods, which is not the case at this site. Also, N.J.A.C. 7:26-2A.7 and Federal RCRA Subtitle D Regulations require that the permeability of the cap be less than or equal to that of the bottom liner system or natural subsoils. Once a subsurface barrier wall is installed under the first operable unit, the wall, and the low permeability soils it will key into, will form a bottom liner system with a permeability expected to be no more than 1×10^{-7} cm/sec. This will require construction of a landfill cap having a similar or lower permeability.

The extent of the cap will be determined during the engineering design phase based on slope stability considerations and cost. Cap construction will be in accordance with the New Jersey Division of Solid and Hazardous Waste Regulations, N.J.A.C 7:26-2A.7 for solid waste type landfills.

There are several components to the landfill cap. Initially the site will be graded to minimize soil erosion and maximize storm water runoff. The construction of the cap will begin with the installation of a gas collection system and a cushioning layer for the overlying liner. A liner, such as a 40-mil synthetic plastic membrane or two feet of clayey soil, will be placed above the gas collection layer to prevent the infiltration of stormwater into the underlying waste. The liner will be chemically compatible with materials it may come in contact with and be able to accommodate stresses caused by settling. Over the liner will be a drainage layer to allow stormwater to drain off of the top of the liner. The uppermost layer of the cap will consist of topsoil capable of supporting vegetative growth. The thickness of the cap above the liner will be sufficient to prevent frost, animal, and root damage to the liner.

In order to manage gases generated by the decay of material in the landfill, the existing gas collection system will be evaluated for compliance with State and Federal requirements. If necessary, further gas extraction wells or other modifications will be made to the system during capping. It is anticipated that the collected gas would be piped to the existing processing plant operated by GSF Energy. Otherwise, a flaring station would be constructed to burn the gas.

To facilitate construction of the landfill cap, clearing and grubbing of the site would be required. Access road improvements may be needed to accommodate the construction equipment that would be traveling to the site. Dust control measures (e.g., the use of water trucks) would be taken to minimize the off-site migration of dust. To prevent soil erosion and reduce off-site sediment

transport, a soil erosion and sediment control plan would be prepared. These plans will identify the measures to prevent soil loss and off-site damages, measures to establish proper vegetation, and post-closure maintenance procedures. Stormwater management controls may also be required.

All necessary permits and approvals will be obtained for construction including, but not limited to, those from: HMDC, Hudson-Essex-Passaic Counties Soil Conservation District, State of New Jersey, and the Town of Kearny. NJDEP permits include those for wetlands disruption, well drilling, air permitting, and landfill disruption.

Post-closure care is required for a minimum of 30 years. Maintenance needs would be determined by periodic site inspections. At a minimum, the vegetated cover, side slopes, fencing, gas collection system, and storm water management systems would require periodic inspection and maintenance.

The construction, operation and maintenance, and total present worth (over a 30 year period, using a 5% discount rate) costs for landfill capping were estimated as follows, assuming that the cap will cover the entire wastefill (approximately 94 acres):

Capital Cost	$ 13,000,000
Annual O&M Costs	$ 430,000
Total Present Worth Costs	$ 19,600,000

If, during design, it is determined that the stability of the landfill will be compromised by capping the entire landfill, or that the benefits realized in terms of reduced leachate production are not equal to the additional costs of capping the entire landfill, a partial cap on the top of the wastefill (approximately 20 acres) will be constructed. The construction, operation and maintenance, and total present worth (over a 30 year period, using a 5% discount rate) costs for partial capping were estimated as follows:

Capital Cost	$ 3,000,000
Annual O&M Costs	$ 90,000
Total Present Worth Costs	$ 4,400,000

10. REMEDIAL ACTION PERFORMANCE

This section evaluates the performance of the remedial action presented in Section 9 in terms of regulatory criteria for selecting remedial alternatives. These include requirements for protection of human health and the environment, implementability, time for remediation, and cost (ref. N.J.S.A. 58:10B-12). The New Jersey Spill Compensation and Control Act (N.J.S.A. 58:10-23.11 et. seq.) states that any cleanup shall be, to the maximum extent possible, in accordance with the Federal National Oil and Hazardous Substances Contingency Plan (NCP). The NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E-5) contain four criteria for the initial evaluation of remedial alternatives that are in accordance with the NCP and are presented below. Any remedy should meet these criteria in order to be considered for the site.

CRITERIA 1 considers protection of human health and the environment. N.J.S.A. 58:10B-12 requires that remediation standards be protective of human health to the level of one additional lifetime cancer risk per million people for carcinogens and to a Hazard Index Level of less than one for noncarcinogens. The remedy selected in this Plan provides protection of human health and the environment by means isolating the landfill contaminants within a subsurface cutoff wall and under a landfill cap. The barrier wall will prevent contaminated leachate from coming into contact with ground or surface waters. Leachate collected from the landfill will be pumped off-site to a permitted disposal facility. The cap will serve to reduce the infiltration of stormwater through the wastefill that causes the generation of leachate. Direct-contact risks associated with contaminated materials and soils will be reduced through the placement of the cap, and implementation of soil erosion and sediment controls. Exposure to gaseous emissions from the landfill will be prevented by the gas collection system.

The remedial action will comply with all applicable federal, state and local laws, and regulations. During the construction of the subsurface barrier wall and cap, some short-term impacts on the environment are anticipated. Some disruption of the surrounding wetlands may occur to allow space for construction equipment and/or the barrier wall or cap. A wetlands mitigation plan will be developed to address these areas. Soil erosion and sediment control measures will be implemented to minimize any impacts from construction on the surrounding environment. Odors from the excavations for the subsurface wall are also anticipated. All work will be performed according to an approved Health and Safety Plan. The air will be monitored for hazardous chemicals and odors.

CRITERIA 2 is implementability, which is the technical feasibility of a remedy including the availability of materials and services needed to implement the chosen solution. Solid waste type caps and gas collection systems are routinely constructed for closure of landfills. Many firms are familiar with the equipment, specialists, and materials required to construct these cap systems.

Subsurface barrier walls to control ground water flow have been used successfully since the 1940s on civil works projects. Since CERCLA legislation in the 1980s, subsurface barrier walls have been used more frequently to control contaminated ground water. Considerable information now exists on the design, testing, construction, and monitoring of subsurface barrier walls of various types, for these purposes. The HMDC has constructed subsurface barrier walls in combination with leachate collection systems at the MSLA 1A Landfill and the MSLA 1E Landfill, which are both nearby. Based on discussions with the HMDC, these remedies have been operating successfully for several years.

The construction of this remedy will require temporary and permanent easements from a number of property owners. Based on past experience, access agreements and easements have been obtained in the past by the NJDEP for environmental cleanup work and should be negotiable for this project.

CRITERIA 3 is timeliness or how quickly an alternative will achieve remediation standards. N.J.S.A. 58:10B-12 and the Federal NCP requires the consideration of whether a remedial alternative can be implemented within a reasonable time frame without endangering human health

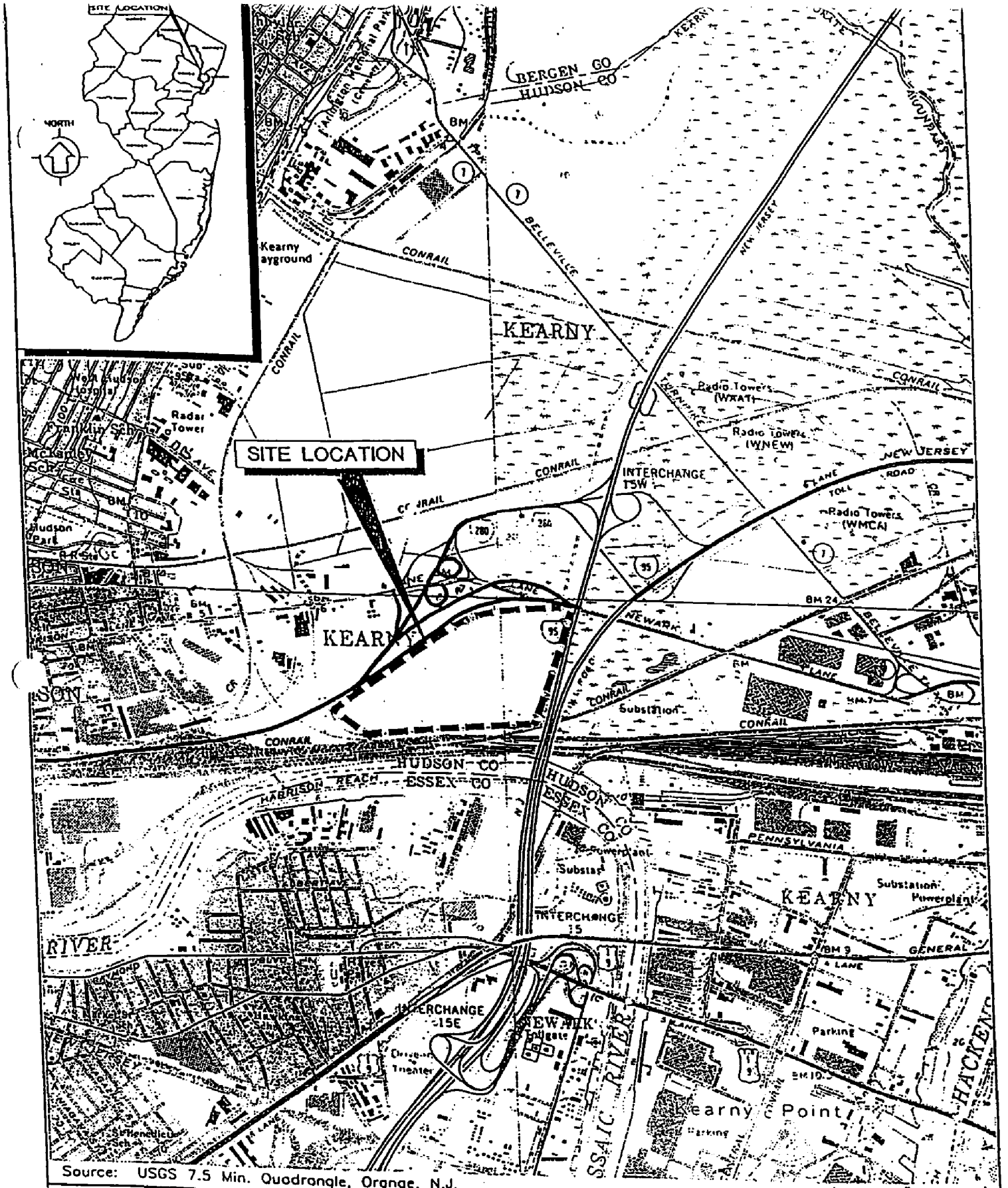
or the environment.

Operable Units 1 and 2 are each expected to take two years to construct after completion of their designs. The beneficial effects of preventing leachate migration into the ground water and surface waters, the control of landfill gas, and prevention of direct contact of humans and animals with waste materials, will begin upon completion of construction.

CRITERIA 4 is cost. The cost of a remedial alternative, excluding "No Action", should not be grossly excessive compared to the other alternatives evaluated. The Background Investigation and Design Recommendations Report evaluated three subsurface wall alternatives, and partial and full capping. The type of barrier wall to be deployed at the site will be determined by design studies of the compatibility of the leachate with the wall material, by the physical constraints of the site (utilities, topography, wetlands, etc), and by health and safety issues. Similarly, the extent of capping will be determined based on engineering and cost/benefit studies. The most cost effective construction methods and materials that meet design criteria will be selected.

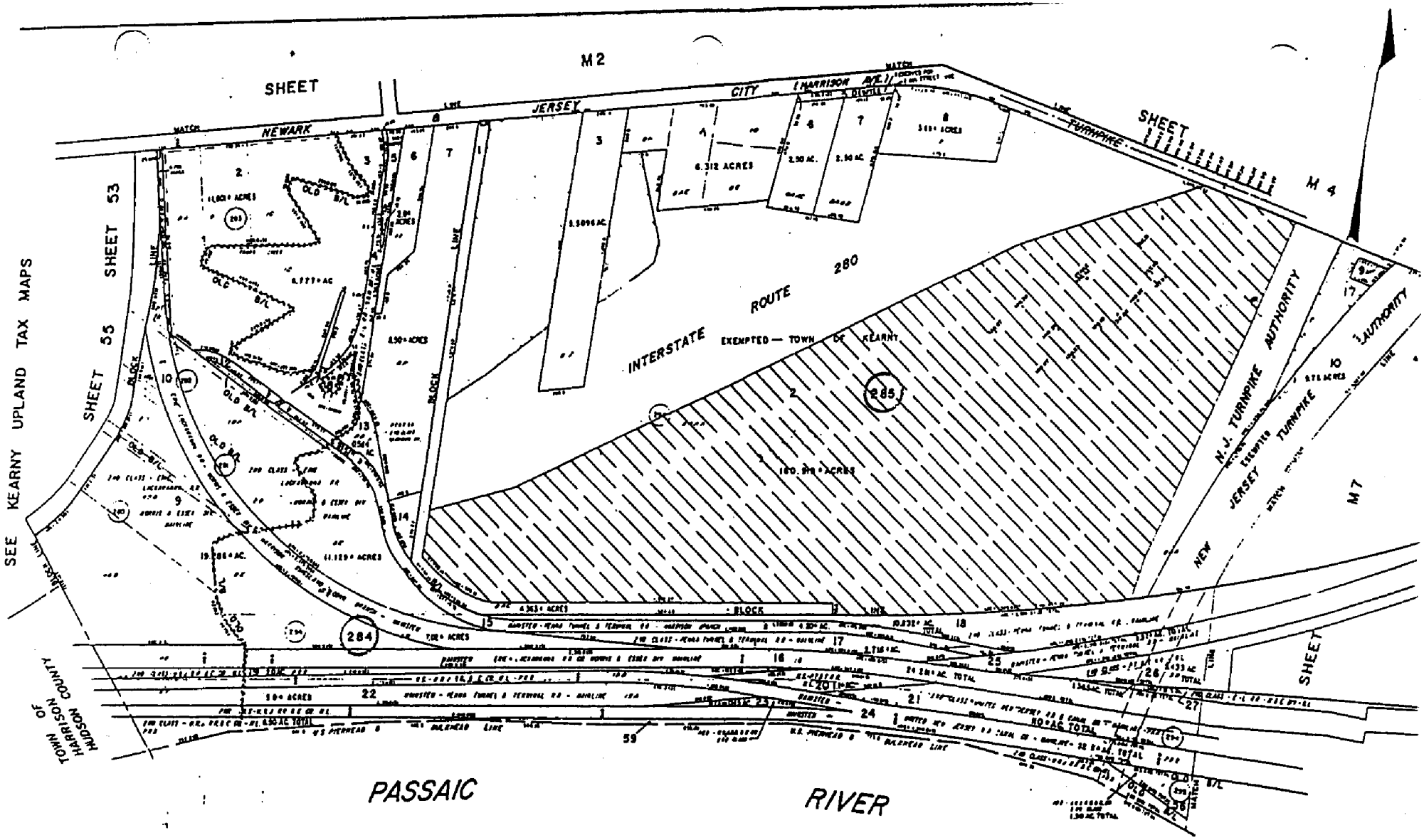
The remedy selected in this Plan addresses all of the four criteria of concern discussed above. It provides for protection of human health and the environment, is technologically feasible, provides for immediate relief from continued pollution of ground and surface waters. Every attempt to minimize short-term impacts to the surrounding community from construction of the remedy will be made.

ATTACHMENT I – FIGURES



Source: USGS 7.5 Min. Quadrangle, Orange, N.J.

N.J. Department of Environmental Protection	MSLA-10 LANDFILL, KEARNY, NEW JERSEY SITE LOCATION MAP NJDEP CONTRACT No. A-85149	Louis Berger & Assoc. 30 Vreeland Road Florham Park, NJ	FIGURE 1



DATUM — U. S. COAST & GEODETIC PLUS 100.00 FEET

NEGLIA ENGINEERING ASSOCIATES
JOSEPH E. NEGLIA — TOWN ENGINEER
AUGUST 1970

FIGURE 2

TAX MAP TOWN OF KEARNY

HUDSON COUNTY, NEW JERSEY

SCALE: 1"=200' NOVEMBER 1, 1964

GERHARDT & KIA — TOWN ENGINEERS
577 KEARNY AVE, KEARNY, NEW JERSEY

REVISED ____ ____ ____ ____ ____

TIERRA-A-018352

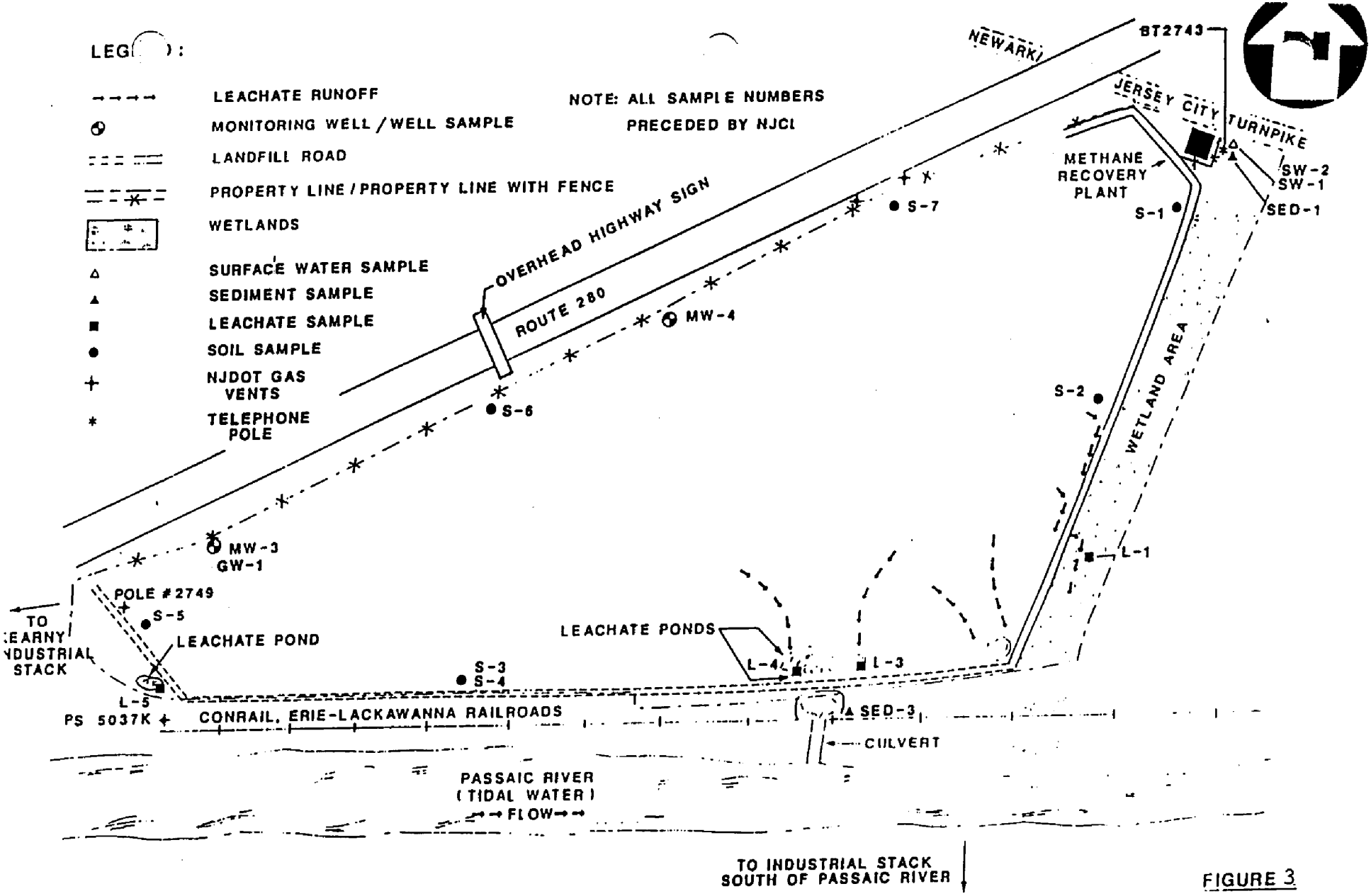


FIGURE 3

SAMPLE LOCATION MAP

MSLA, 1-D LF, KEARNY, N.J.

(SCALE UNKNOWN)

NUS CORPORATION

ATTACHMENT II - TABLES

TABLE 1
MSLA 1-D LANDFILL
SITE INSPECTION SAMPLING RESULTS-GROUND WATER *

QUANTIFIED COMPOUNDS (ug/L)	SAMPLE IDENTIFICATION NJCL-GW1	NJDEP CLASS IIA GWQS (ug/L)**
VOLATILE ORGANIC COMPOUNDS		
Chlorobenzene	[redacted]	4
Ethylbenzene	50	700
Toluene	24J	1000
Xylenes (Total)	[redacted]	40
SEMI-VOLATILE ORGANIC COMPOUNDS	ND	
PESTICIDES/PCBS	ND	
METALS		
Aluminum	[redacted]	200
Arsenic	6.9J	8
Barium	[redacted]	2000
Calcium	61,000 E	NP
Chromium	[redacted]	100
Cobalt	3.4J	NP
Copper	61.1 E	1000
Iron	[redacted]	300
Lead	[redacted]	10
Magnesium	92,000 E	NP
Manganese	[redacted]	50
Nickel	[redacted]	100
Potassium	505,000 E	NP
Sodium	[redacted]	50,000
Vanadium	20.6J	NP
Zinc	331 E	5000

NOTES:
* Sampling performed by NUS Corporation and analyses performed by Keystone Environmental, 1/90.
** GWQS Ground Water Quality Standards (N.J.A.C. 7:9-6)

ug/L - micrograms per liter
J - Estimated value for compound present below CRDL but above IDL
E - Estimated value
NP - Not published for this constituent

TABLE 2
MSLA 1-D LANDFILL
SITE INSPECTION SAMPLING RESULTS - LEACHATE*

QUANTIFIED COMPOUNDS (ug/L)	SAMPLE IDENTIFICATION				SWQC HUMAN HEALTH (ug/L)**	SWQC AQUATIC LIFE (ug/L)***
	NJCL-L1	NJCL-L3	NJCL-L4	NJCL-L5		
VOLATILE ORGANIC COMOUNDS						
2-Hexanone	25E	ND	ND	ND	NP	NP
SEMIVOLATILE ORGANIC COMPOUNDS						
Phenanthrene	540J	250J	300J	780J	NP	NP
Flouranthene	860	380J	440J	820J	370	NP
Pyrene	1,100E	1,100E	760E	800J	8,970	NP
Benzo(a)anthracene	460J	370J	350J	380J	0.031	NP
Chrysene	550J	450J	420J	420J	0.031	NP
Benzo(b)Fluoranthene	1100	660J	730J	570J	0.031	NP
Benzo(a)pyrene	550J	540J	440J	ND	0.031	NP
Indeno(1,2,3-cd)pyrene	440J	310J	280J	ND	0.031	NP
Benzo(g,h,i)perylene	430J	420J	330J	ND	NP	NP
PESTICIDES/PCBS						
beta-BHC	3.0	ND	ND	ND	0.460	NP
4,4'-DDD	2.8J	ND	35J	7.4J	0.000837	NP
4,4'-DDE	ND	ND	24J	27J	0.000590	NP
4,4'-DDT	7.0J	ND	39J	11J	0.000590	NP
Methoxychlor	ND	ND	47J	ND	NP	0.03
METALS						
Aluminum	12,200 E	9,310 E	6,430 E	9,980 E	NP	NP
Antimony	ND	8.20J	6.40J	14.5	4,300	NP
Arsenic	4.8	ND	5.4	7.3	0.136	36
Barium	559 E	260 E	330 E	215 E	NP	NP
Beryllium	0.47J	0.71J	0.25J	2	NP	NP
Cadmium	0.78J	2.1	0.98J	3.9	NP	9.3
Calcium	24,100 E	13,600 E	12,600 E	10,600 E	NP	NP
Chromium	20 E	10.3 E	26.2 E	68.1 E	3,230	50 a
Cobalt	6.20J	8.30J	21.5	6.70J	NP	NP
Copper	37.4 E	61.3 E	41.3 E	490 E	NP	5.6 b
Iron	17,500 E	27,500 E	29,500 E	16,500 E	NP	NP
Lead	30.0 E	50.3 E	24.8 E	125.0 E	NP	8.1
Magnesium	6,010 E	3,290 E	4,100 E	3,690 E	NP	NP
Mercury	0.41 E	0.39 E	0.35 E	2.6 E	0.146	0.025 b
Nickel	25.8	17.5	42.7	78.1	3,900	8.2
Potassium	1,530	720J	573J	1,450	NP	NP
Vanadium	34.9	30.7	33.5	26.5	NP	NP
Zinc	38.4 E	45.0 E	22.3 E	2,360 E	NP	81

NOTES:
* Sampling performed by NUS Corporation and analyses performed by Keystone Environmental, January 1990.
** SWQC Surface Water Quality Criteria - Saltwater, Human health criteria, total recoverable NJAC 7:9B-1.14
*** SWQC Surface Water Quality Criteria - Saltwater, Chronic effects aquatic life criteria, dissolved
a - Chronic effects for Cr^{+6}
b - Total recoverable

ug/L - micrograms per liter
J - Estimated value for compound present below CRDL but above IDL
E - Estimated value
ND - Not Detected

TABLE 3
MSLA 1-D LANDFILL
SITE INSPECTION SAMPLING RESULTS - SURFACE WATER *

QUANTIFIED COMPOUNDS (ug/L)	SAMPLE IDENTIFICATION NJCL-SW2	NJDEP HUMAN HEALTH SWQC (ug/L)**	NJDEP AQUATIC SWQC (ug/L)***
VOLATILE ORGANIC COMPOUNDS			
Benzene	3J	71	NP
Chlorobenzene	3J	21,000	NP
SEMI-VOLATILE ORGANIC COMPOUNDS	ND		
PESTICIDES/PCBS	ND		
METALS			
Aluminum	25,100E	NP	NP
Arsenic	22.9E	0.136	36
Barium	1240	NP	NP
Cadmium	6.9	NP	9.3
Calcium	233,000E	NP	NP
Chromium	292E	3,230	50 a
Cobalt	30.4J	NP	NP
Copper	1,550E	NP	5.6 b
Iron	60,800E	NP	NP
Lead	1,050E	NP	8.1
Magnesium	108,000E	NP	NP
Manganese	1,710E	100	NP
Mercury	2.0E	0.146	0.025 b
Nickel	222E	3,900	8.2
Potassium	159,000	NP	NP
Sodium	631,000	NP	NP
Vanadium	100E	NP	NP
Zinc	1070E	NP	81

NOTES:
* Sampling performed by NUS Corporation and analyses performed by Keystone Environmental, 1/90.
** SWQC Surface Water Quality Criteria - Saltwater, Human health criteria, total recoverable NJAC 7:9B-1.14
*** SWQC Surface Water Quality Criteria - Saltwater, Chronic effects aquatic life criteria, dissolved
a - Chronic effects for Cr^{+6}
b - Total recoverable

ug/L - micrograms per liter
J - Estimated value for compound present below CRDL but above IDL
E - Estimated value
NP - Not published for this constituent
ND - Not Detected

TABLE 4
MSLA 1-D LANDFILL
SITE INSPECTION SAMPLING RESULTS-SEDIMENTS*

QUANTIFIED COMPOUNDS (mg/kg)	SAMPLE IDENTIFICATION		MARINE/ESTUARINE SEDIMENT CRITERIA**	
	NJCL-SED1	NJCL-SED3	Low Effects Level (mg/kg)	Medium Effects Level (mg/kg)
VOLATILE ORGANIC COMPOUNDS				
2-Butanone	0.053	0.095	NP	NP
2-Hexanone	0.014J	ND	NP	NP
SEMI-VOLATILE ORGANIC COMPOUNDS				
Phenanthrene	[illegible]	ND	0.240	1.50
Flouranthene	[illegible]	[illegible]	0.600	5.10
Pyrene	[illegible]	[illegible]	0.665	2.60
Benzo(a)anthracene	[illegible]	[illegible]	0.261	1.60
Chrysene	[illegible]	[illegible]	0.384	2.80
Benzo(b)Fluoranthene	4.50	1.40J	NP	NP
Benzo(a)pyrene	[illegible]	[illegible]	0.430	1.60
Indeno(1,2,3-cd)pyrene	[illegible]	[illegible]	0.200	320.00
Benzo(g,h,i)perylene	[illegible]	[illegible]	0.17	320.00
Total Polynuclear Aromatic Hydrocarbons	[illegible]	[illegible]	4.0	45.0
PESTICIDES/PCBS				
beta-BHC	[illegible]	[illegible]	0.005	21
4,4'-DDD	0.015J	0.180 E	NP	NP
4,4'-DDE	[illegible]	ND	0.0022	0.027
4,4'-DDT	ND	[illegible]	0.0016	0.0460
METALS				
Aluminum	10,600 E	12,000 E	NP	NP
Arsenic	[illegible]	5.32	8.2	70.0
Barium	180 E	228 E	NP	NP
Cadmium	[illegible]	ND	1.2	9.6
Calcium	5,020 E	13,000 E	NP	NP
Chromium	[illegible]	50.1 E	81.0	370.0
Copper	[illegible]	[illegible]	34.0	270.0
Iron	19,300 E	16,500 E	NP	NP
Lead	[illegible]	[illegible]	47.0	218.0
Magnesium	2,980 E	3,270 E	NP	NP
Mercury	[illegible]	[illegible]	0.15	0.71
Nickel	[illegible]	[illegible]	21.0	52.0
Sodium	1310J	1,660	NP	NP
Vanadium	34	33.7	NP	NP
Zinc	[illegible]	[illegible]	150.0	410.0

NOTES:
* Sampling performed by NUS Corporation and analyses performed by Keystone Environmental, January 1990.
** NJDEP Guidance For Sediment Quality Evaluations, November 1998

mg/kg - milligrams per kilogram
J - Estimated value for compound present below CRDL but above IDL
E - Estimated value
NP - Not published for this constituent
ND - Not Detected

TABLE 5
MSLA 1-D LANDFILL
SITE INSPECTION SAMPLING RESULTS-SOIL*

QUANTIFIED COMPOUNDS (mg/kg)	SAMPLE IDENTIFICATION				NJDEP NRDCSCC** (mg/kg)	NJDEP RDCSCC*** (mg/kg)	NJDEP IGWSCC**** (mg/kg)
	NJCL-S1	NJCL-S3	NJCL-S6	NJCL-S7			
VOLATILE ORGANIC COMPOUNDS							
Chlorobenzene	ND	ND	ND	0.150	660	37	1
Ethylbenzene	ND	ND	ND	0.081	1,000	1,000	100
Xylenes (Total)	ND	ND	ND	0.069	1,000	410	67
SEMI-VOLATILES ORGANIC COMPOUNDS							
Phenanthrene	ND	ND	ND	1.20	NP	NP	NP
Fluoranthene	0.150J	ND	ND	1.90	10,000	2,300	100
Pyrene	0.170J	0.93	ND	2.20	10,000	1,700	100
Benzo(b)fluoranthene	0.170J	ND	ND	1.40	4	0.9	50
Benzo(a)pyrene	ND	ND	ND	0.75E	0.66	0.66	100
Benzo(a)anthracene	ND	ND	ND	0.91J	4	0.9	500
Indeno(1,2,3-cd)pyrene	ND	ND	ND	0.39E	4	0.9	500
PESTICIDES/PCBS							
Beta-BHC	0.015	ND	0.078E	0.100	NP	NP	NP
4,4'-DDT	0.0027J	0.100	ND	ND	9	2	500
Methoxychlor	0.040J	0.030J	0.200J	ND	5,200	280	50
4,4-DDE	ND	0.051J	ND	ND	9	2	50
METALS							
Aluminum	5,660 E	7,840E	8,240 E	13,000 E	NP	NP	NP
Arsenic	2	4.1	6.1	6.7	20	20	(Site Specific)
Barium	26.4J	157 E	78.9 E	193	47,000	700	(Site Specific)
Cadmium	0.74J	1.1	1.6	1.0J	100	39	(Site Specific)
Chromium	11.4	60.8	85.2 E	34 E	(Site Specific)*	120,000*	NP
Copper	37.3 E	56.9 E	59.1 E	137 E	600	600	(Site Specific)
Lead	40.6	216 E	71.4 E	200 E	600	400	(Site Specific)
Mercury	ND	0.36 E	1 E	0.82 E	270	14	(Site Specific)
Nickel	ND	120	17.7	16.8	2,400	250	(Site Specific)
Vanadium	12.2	27.5	22.6	18.7	7,100	370	(Site Specific)
Zinc	26.3 E	206 E	132 E	211 E	1,500	1,500	(Site Specific)

NOTES:
* Sampling performed by NUS Corporation and analyses performed by Keystone Environmental, January 1990.
** NRDCSCC Non-Residential Direct Contact Soil Cleanup Criteria (Last Revised-5/3/99)
*** RDCSCC Residential Direct Contact Soil Cleanup Criteria (Last Revised-5/3/99)
**** IGWSCC Impact to Ground Water Soil Cleanup Criteria (Last Revised-5/3/99)
* Trivalent Chromium

mg/kg - milligrams per kilogram
J - Estimated value for compound present below CRDL but above IDL
NP - Not published for this constituent
ND - Not Detected
E-Estimated value

ONAL HEALTH COMMISSION

AVE. HARRISON, NEW JERSEY 07029 PAGE 1 of 1

AIR PRODUCTS

INVESTIGATION

H.R.H.C. CASE#

ARRIVED 2:00 DEPARTURE 3:00 MANHOURS

LOCATION: Air Products + Chemicals, Inc. RP:

ADDRESS: 1501 Harrison Avenue
Kearny, N.J.

LOCATION PHONE# 997-6527 OTHER:

NOTIFICATION REC'D FROM: self

DATE: 4/21/93 TIME: 2:00 P.M.

NATURE OF INCIDENT: unknown liquid percolating out of ground

OTHER RESPONDING AGENCIES:

VIOLATIONS ISSUED:

FINDINGS: Site inspection conducted as a result of liquid observed percolating out of ground in front of facility. Liquid had a slight discoloration and was foaming as it flowed along curb into nearby marsh.
According to Mr. Cecil Bonnelly Jr., Plant Manager, source of discharge was investigated and found not to be from their process. Liquid suspected of being from a leak in a water main which runs along Harrison Avenue or landfill leachate due to recent high precipitation.
He indicated Water department was aware of situation and had scheduled work crew to begin excavating on Friday.
John Sarnas, BOH, had also visited site.

Findings reported to Gary Gaetano, HRHC Program Coordinator. No cause for further action at this time.

BAE000004

SUPERVISOR SIGNATURE

INVESTIGATOR SIGNATURE

FILE: SITE ✓ LOG

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TIERRA-A-018360

HUDSON REGIONAL HEALTH COMMISSION

215 HARRISON AVE. HARRISON, NEW JERSEY 07029 PAGE____ of____

INVESTIGATION

DEP

INVESTIGATION DATE: 2/4/94 H.R.H.C. CASE# 94-2-4-1129-03

INVESTIGATOR DB TIME ARRIVED 1030 DEPARTURE 1200 MANHOURS____

LOCATION: Air Products RP:____

ADDRESS: 1501 Harrison Ave

Kearny

LOCATION PHONE# 997-6527 OTHER:____

NOTIFICATION REC'D FROM: HC Emergency - Demetrio Arenabe 915-1360

DATE: 2/4/94 TIME: 10:15

NATURE OF INCIDENT: Report of yellow discharge along Harrison Ave near Rt 280 interchg

OTHER RESPONDING AGENCIES: —

VIOLATIONS ISSUED: —

FINDINGS: ~~Found~~ yellowish-brown "discharge" seeping in front of Air Products. I spoke to Cecil Bennett, plant manager, he said this discharge is leachate from landfill 1-D and is not a leak of the effluent used in the gas generation at this plant.

This is not the first discharge from the landfill, last March Cecil said the same thing occured. An area was excavated to determine if a pipe broke, this was tested, and it was determined no leak from the facility had caused this, but the leachate just found an area of less resistance and flowed out.

Landfill 1-D has not been "Capped" nor does it have a leachate collection system.

Air Products offered to sample the discharge and analyze it to verify that it is leachate and not their effluent, and will follow this with a letter to Kearny according to their (engineer) requesting information re: the leachate.

I spoke to Gary Gaetano to update and Demetrio to update, Demetrio requested a copy of field report.

BAE000005

SUPERVISOR SIGNATURE

INVESTIGATOR SIGNATURE

FILE: SITE 1 LOG____

99

TIERRA-A-018361

HUDSON REGIONAL HEALTH COMMISSION

215 HARRISON AVE. HARRISON, NEW JERSEY 07029
TEL. 201-485-7001 FAX 201-485-1251

REPORT OF PHONE CALL OR VISIT

Bureau or Office ____________________

In ________ Out ________ File AIR PRODUCTS/GSF

Date ________ Time ________ Routing 1501 HARRISON AVE
HARRISON N.J. 07029

Person Contacted MIKE SOYERGC / CECILLE BONELLE Phone No. 997-6527 / 215 481-4317

Affiliation GSF AIR PRODUCTS

Subject of Call / Visit LEACHATE COMING THROUGH PROPERTY FROM 1 D LANDFILL

Summary of Call / Visit Don Beasley HRHC investigated above - See FR
U/S called re: analyzing product to demonstrate
it was not their effluent. I told them HRHC would not
require analysis at this time. U/S stated it was voluntary.
Attempted to contact DEPE - DSW & DWR for
suggestions re: above - no one available - Faxed
copy of technical regs. 7:26E - dealing with
unknowns to Mr Bonello. Also restated HRHC was not
requesting the analysis at this time.
Ed Grosvenor & Mike Beard - KHD - informed of status
Pat Ferraro DEPE - DSW "
Steve Sedlack " " "

Action Recommended Periodic follow up at site to determine
if discharge is ongoing and approximate quantity

[signature]
Signature

TIERRA-A-018362

HUDSON REGIONAL HEALTH COMMISSION

MEADOWVIEW CAMPUS

595 COUNTY AVENUE, BUILDING 1, SECAUCUS, NEW JERSEY 07094

INVESTIGATION

INVESTIGATION DATE: 3/11/99 ARRIVED 10:30 DEPART 11:40 HOURS

REC'D FROM: KFD DATE: 3/4/99 TIME: 1000 Am

LOCATION: D-1 Landfill RP:

ADDRESS: 1501 Harrison Ave, Kearny, NJ. — H.M.D.C., Kearny town, GSF/Ecogas.

LOCATION PHONE# 201-997-6527

NATURE OF INCIDENT: oily, seepage, spill?

OTHER AGENCIES: KPD, KHD. VIOLATIONS:

FINDINGS:

Observed liquid issuing to the ground surface within 1 foot of the curb area in front of GSF/Ecogas/HMDC Landfill. Said liquid was flowing along the curb to a surface water discharge point just east of the facility. An oily sheen had accumulated. Met with Capt. Dal, KFD and M. Brand KHD. Suggested that DEP be notified. (Case# 99-03-11-1117 08)

Mr. Joe Szivek, Plant Mgr of Ecogas said the liq. is leachate from the landfill that use to run to the surface waters directly until the Co/DOT change the road. He volunteered to put down oil absorbent "pillows" and the fire dept sanded & marked off the area to traffic.

H.M.D.C., N.J. DEP (Chris Doiv), & Ecogas are having a meeting tomorrow about how to resolve this flow.

NFA will follow up with HD.

SUPERVISOR SIGNATURE

INVESTIGATOR SIGNATURE

BAE000011

FILE: SITE X LOG X

EX: Y N U

105

TIERRA-A-018363

ACTIVE:
REFERRED: X
NOV ISSUED:
CLOSED:
ASST. REQUEST:

COMPLIANCE ASSISTANCE REPORT

COMPLAINT NOTIFICATION REPORT

NORTH: X
CENTRAL:
SOUTH:
MGT.REF:

REFERRAL#:

DATE REC'D: DATE DUE:
CASE NO.: 1999-03-11 # 1404
Yr. Mo. Day

DATE: 1999-03-11 REC'D BY: COMM.CTR. TIME: 11:17

INCIDENT REPORT BY

Last Name: OPERATOR 3 First Name: Phone: (201)991-1400
Street:
City: KEARNY County: HUDSON State: NJ Zip:

Affiliation/Title: KEARNY FIRE DEPT.

INCIDENT LOCATION Transportation: Facility: x Other:

Site Name: D LANDFILL Phone:
Street: HARRISON/280 RAMP
City: KEARNY County: HUDSON State: NJ Zip:
Date of Incident: 1999-03-11 Time: 10:01

RESPONSIBLE PARTY Suspected: x Unknown:
Company Name: D LANDFILL Phone:
Contact: Title:
Street: HARRISON AVE
City: KEARNY County: HUDSON State: NJ Zip:

OFFICALS NOTIFIED (Name/Title)

NJSP:	Phone:	Date:	Time:
COUNTY HEALTH: HUDSON CO CEHA	Phone: (201)223-1133	Date:	Time:
LOCAL HEALTH : KEARNY H.D.	Phone:	Date:	Time:
USEPA:	Phone:	Date:	Time:
OTHER: NO.HAZ.WST.	Phone:	Date:	Time:

Assigned to: Date Assigned: Date Closed:

Violations cited NJAC:
COMMENTS: LEACHATE FROM LANDFILL RUNNING OFF SITE ONTO ROADWAY,LOCAL HEALTH DEPT ON SCENE.

COMMENTS CONT'D:

** TOTAL PAGE.002 **

DEP-090
5/95

New Jersey Department of Environmental Protection

COMMUNICATIONS CENTER NOTIFICATION REPORT

Received: 03/11/1999 | TD Log#: 39936

Operator: JIMH | Reviewed By: | Case #: 99-03-11-1117-15

Notification Type: Municipality

Reported By: OPER 3 | Affiliation: KEARNY FD | Phone: 201-991-1400

Street Address: | Municipality: | State:

Incident Location: Other

Site: AREA OF | Phone:

Street Address: HARRISON/280 RAMP | Municipality: KEARNY TOWN | County: HUDSON | State: NJ

Location Type: Commercial | Incident Date: 03/11/1999 | Time: 1011

Substance Released: LEACHATE

Amount Released ( ): UNKNOWN

ID: Known | State: Liquid | CAS#: | Release Is: Continuous

Additional Substances:

Substance Contained?: No | Hazardous Material?: U | TCPA?: N | A310 Letter?: N

COMU Code: 0907 | Referral Code: 101 | Is Hazardouse Waste Involved?: No

Incident Description: Spill

Injuries?: No | Public Evac?: No | Facility Evac?: No | Public Exposure?: No

Police On Scene?: Yes | Firemen On Scene?: Yes | DEP Requested?: No | Road Closure?: No

Wind Speed/Direction: | Contamination Of: Land | Receiving Water:

Status at Scene:

LEAK FROM LANDFILL TO ROADWAY.LOCAL HEALTH DEPARTMENT ALSO ON SCENE

Responsible Party: Known

Party: D LANDFILL | Phone:

Contact: | Title:

Street Address: HARRISON AVE | Municipality: KEARNY TOWN | County: HUDSON | State: NJ

OFFICIALS NOTIFIED

	Name	Affiliation	Phone	Date	Time
NJSP					
MUNIC					
OTHER					

	Name	Affiliation	Method	Date	Time
1.		BFO-CAS DRPSR	Faxed, Mailed	03/11/1999	
2.		Northern HAZ-WST	Faxed	03/11/1999	
3.		HQ DSWM	Faxed	03/11/1999	

COMMENTS

MAR 11 '99 11:31 NJDEP SRRFOX PAGE.01

** TOTAL PAGE.02 **

TIERRA-A-018365

HUDSON REGIONAL HEALTH COMMISSION
MEADOWVIEW CAMPUS
595 COUNTY AVENUE, BUILDING 1, SECAUCUS, NEW JERSEY 07094

FOLLOW UP/CONTINUATION **DATE:** 3/12/99 **HOURS:** 1

CASE NAME: **ADDRESS:**

DI Landfill
1501 Harrison Ave, Kearny.

Contacted Chris Dein of HMDC (201-460-1700) who explained that the property is owned by the town of Kearny. He is aware of the runoff problem and says it resulted from the county obliterating a french drain when the road was improved. CSE had installed the drain specifically to direct the leachate to a storm drainage area near the landfill.

He has had meetings with ECOGAS and DEP to address the leachate from the entire site, but not about this particular discharge.
Mike Burlingame (609-292-1424) is a contact from Bureau of Site Management.
Mr. Dein said Commissioner Shinn considers the landfill a top priority, but he doesn't foresee a quick remediation.

I will [illegible] the matter to the property owner Kearny Town.

Scheduled a meeting with Mike Burlingame for 3-23-99 to review site problems.

INVESTIGATOR SIGNATURE

FILE: **SITE** ✓ **LOG** ✓

TIERRA-A-018366

State of New Jersey
Christine Todd Whitman, Governor
Department of Environmental Protection
Robert C. Shinn, Jr., Commissioner

PLEASE FAX THIS INCIDENT FOLLOW-UP SHEET TO (609)588-2444 WITHIN TEN (10) WORKING DAYS OF RECEIPT.

FROM: Hudson Co. CEHA J. Demjanick HEALTH DEPT.

CASE #: 99-03-11-1404 DATE RETURNED TO DEP: 3-17-99

INCIDENT LOCATION: D-1 Landfill
Harrison Ave. & 280 ext. ramp
Kearny

MUNICIPALITY: Kearny town

VIOLATION (S) ISSUED: YES ____ (NO) [circled]

RESULTS OF INVESTIGATION

DATE OF COMPLETION: 3/11/99

(If still ongoing, please explain why with an anticipated date of completion)

Also reported as Case # 99-03-11-1117-15 by the Kearny Fire dept.
Material is leachate issuing from grounds of landfill & running onto roadway continuously. The material is a foul smelling aqueous liquid with an oily sheen.
This may be addressed through the Bureau of Site Management (Mr. Mike Buckingham, 609-292-1424)